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1995
Appendix A, part 1

Geologic, Geomorphic and Chemical Characteristics of Wetlands Selected for Use in Biocriteria Development by the Montana Department of Environmental Quality

by

Mark D. Shapley
Montana Natural Heritage Program
1515 East 6th Avenue
Helena, MT 59620

for the

Montana Department of Environmental Quality
Water Quality Division

December, 1995

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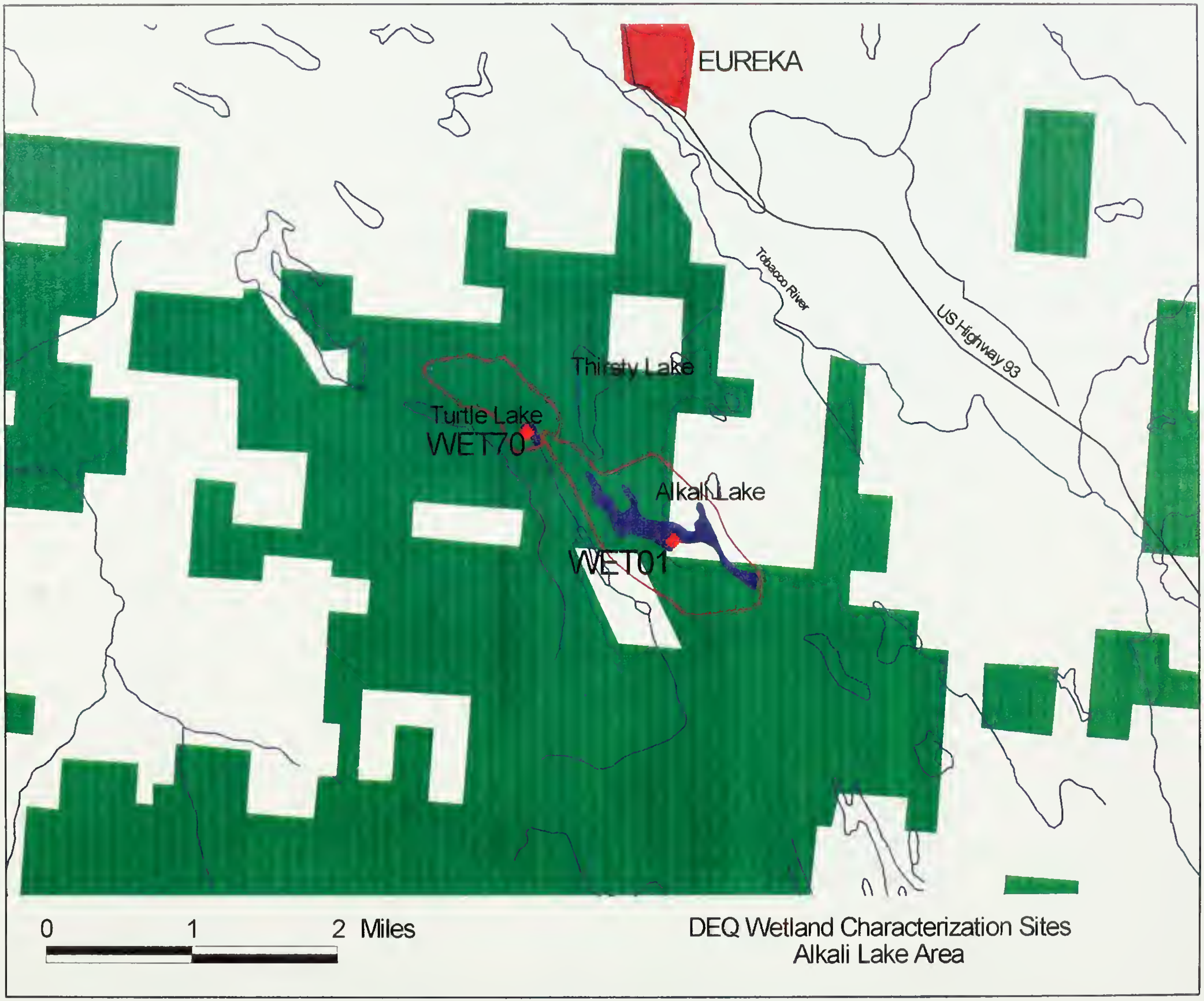
Appendix A

Data Summaries and Maps of the DEQ Wetland Characterization Sites

Part 1, Sites WET01 - WET40



DEQ Wetland Characterization Sites
Alkali Lake Area

Wetland: ALKALI LAKE

Site Code: WET01

7.5 Minute Quad: EUREKA SOUTH

Lat: 48 50 5
Long: 115 2 30

Mean Annual Precipitation in Inches:	17.00
Mean Annual Potential Evaporation (Penman) in Inches:	30.00
'Net Precipitation' in Inches:	-13.00

Site does not have a mapped surface inlet.

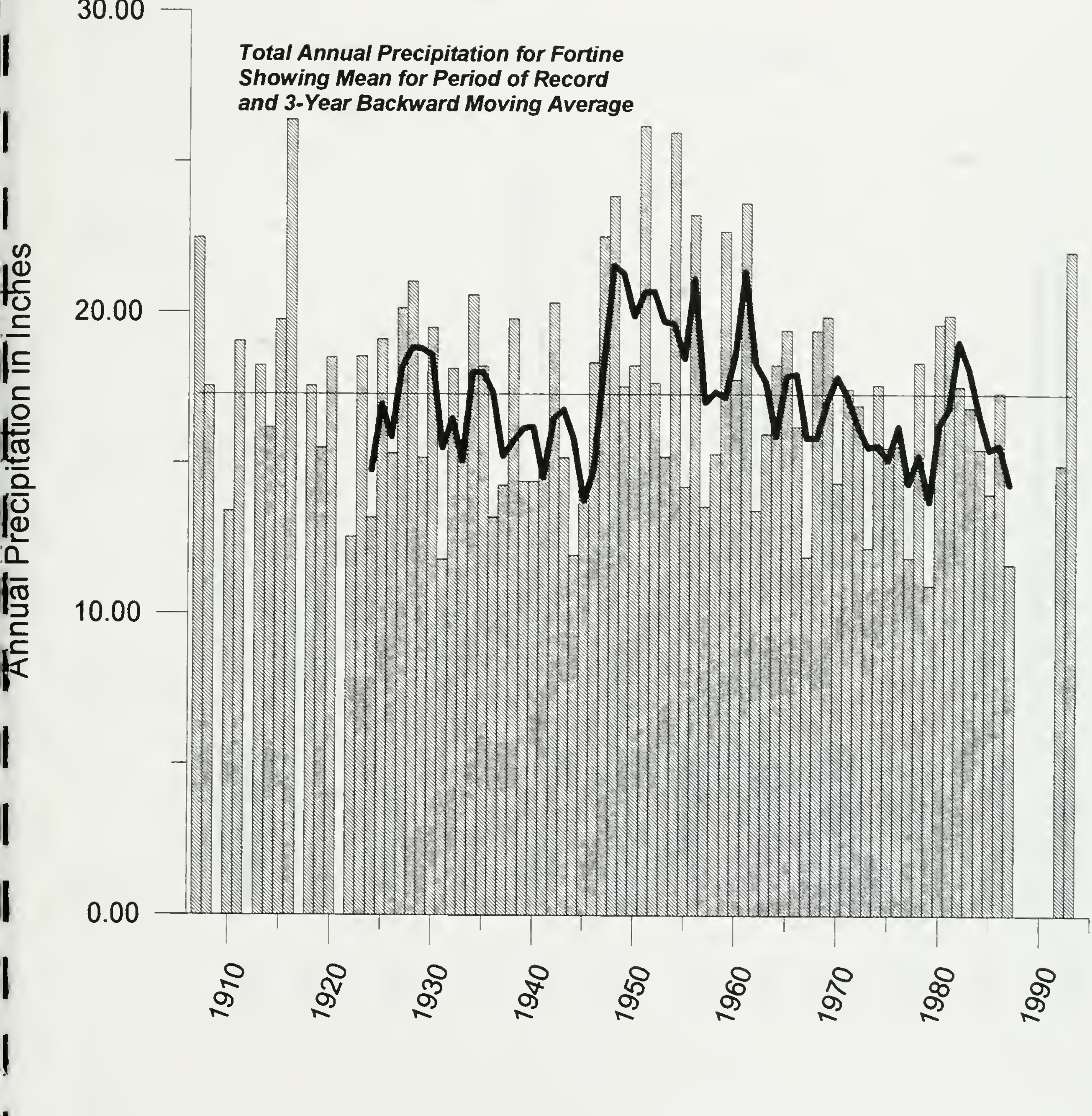
Site does not have a mapped surface outlet.

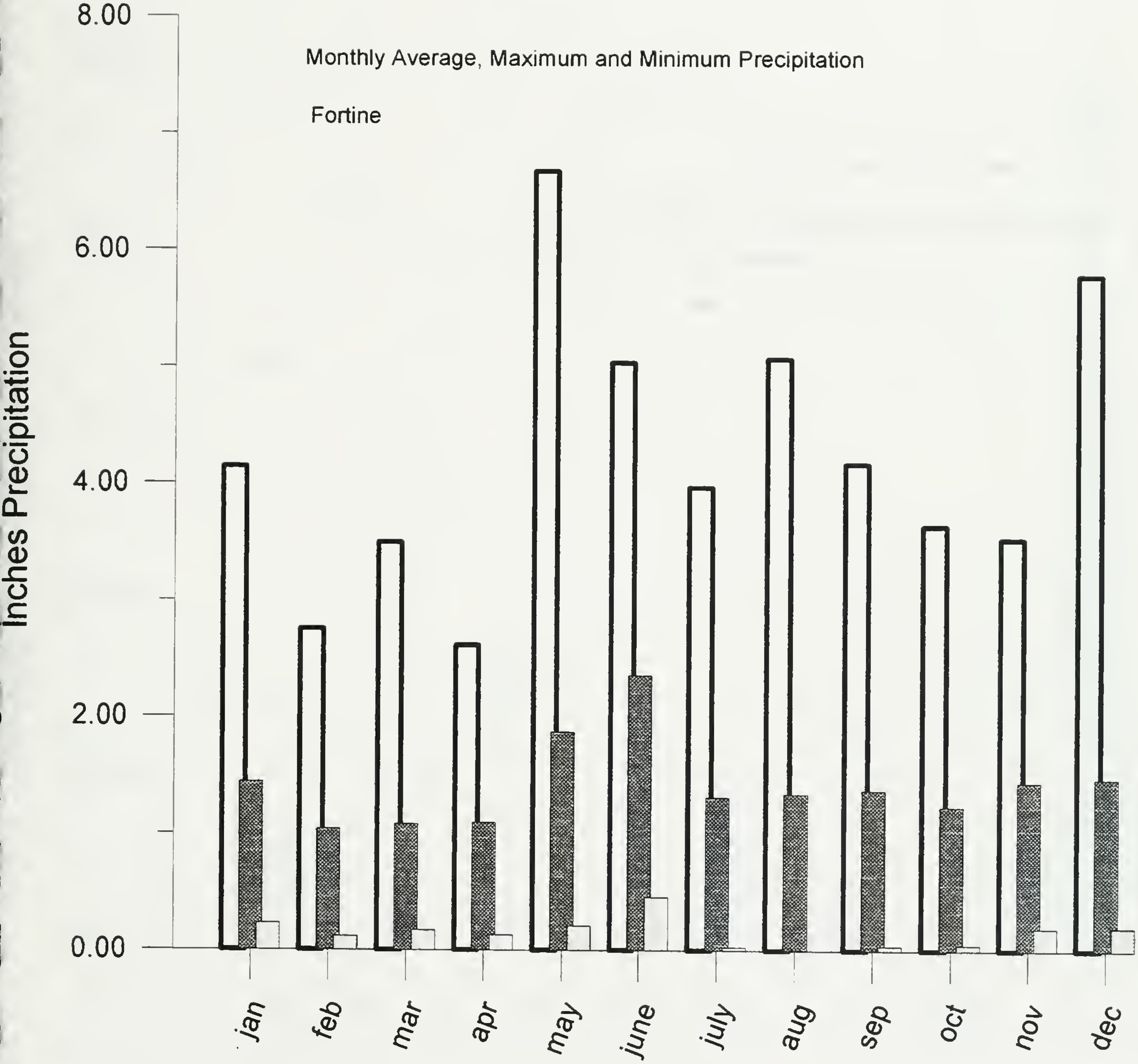
Site is not known to be artificially impounded.

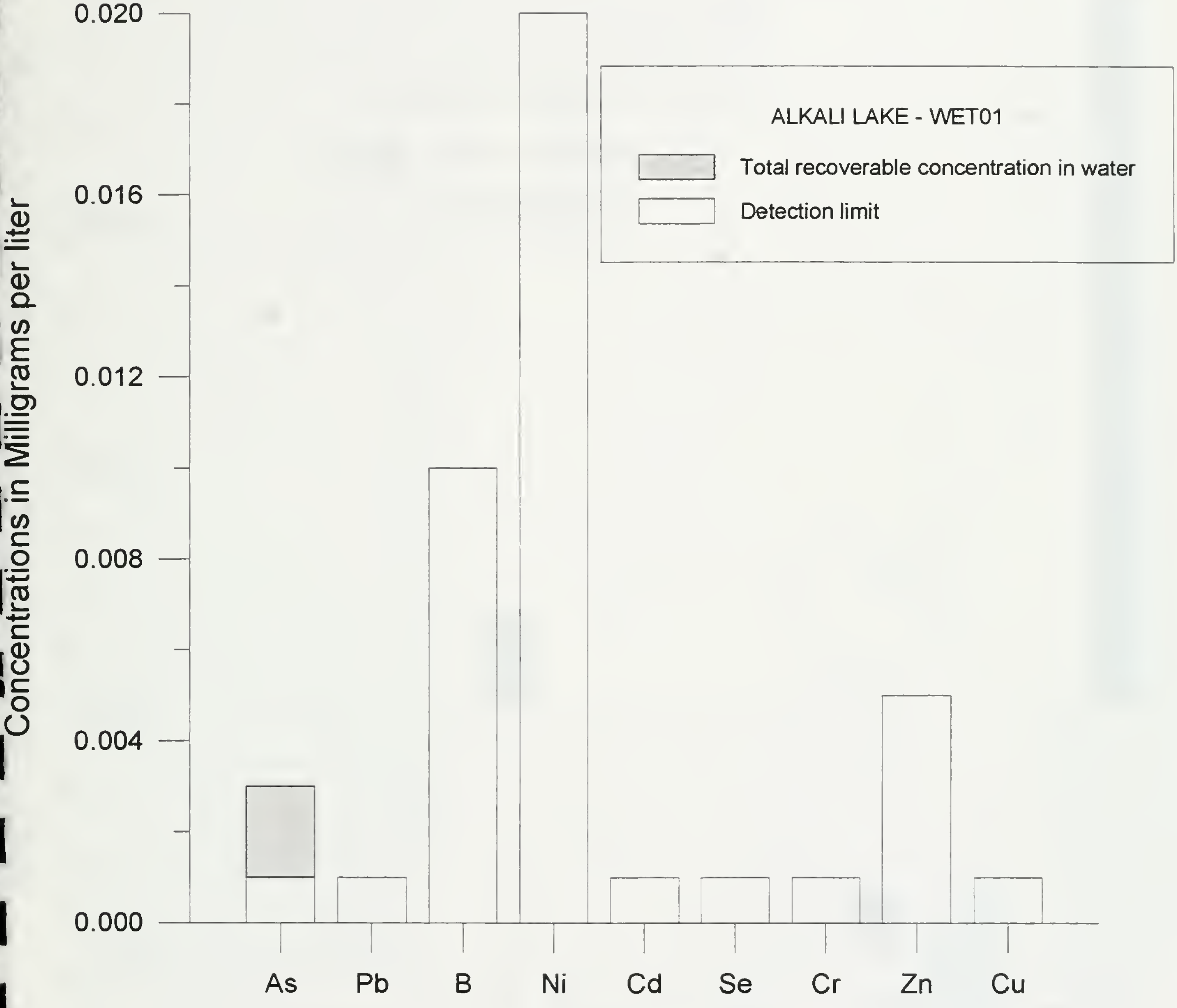
Site does not have known significant water imports.

Mapped area of wetland:	100 acres
Area of contributing drainage basin:	560 acres
Mapped elevation of wetland surface:	2982 ft
Maximum elevation within drainage basin:	3210 ft
Net relief of contributing basin:	228 ft

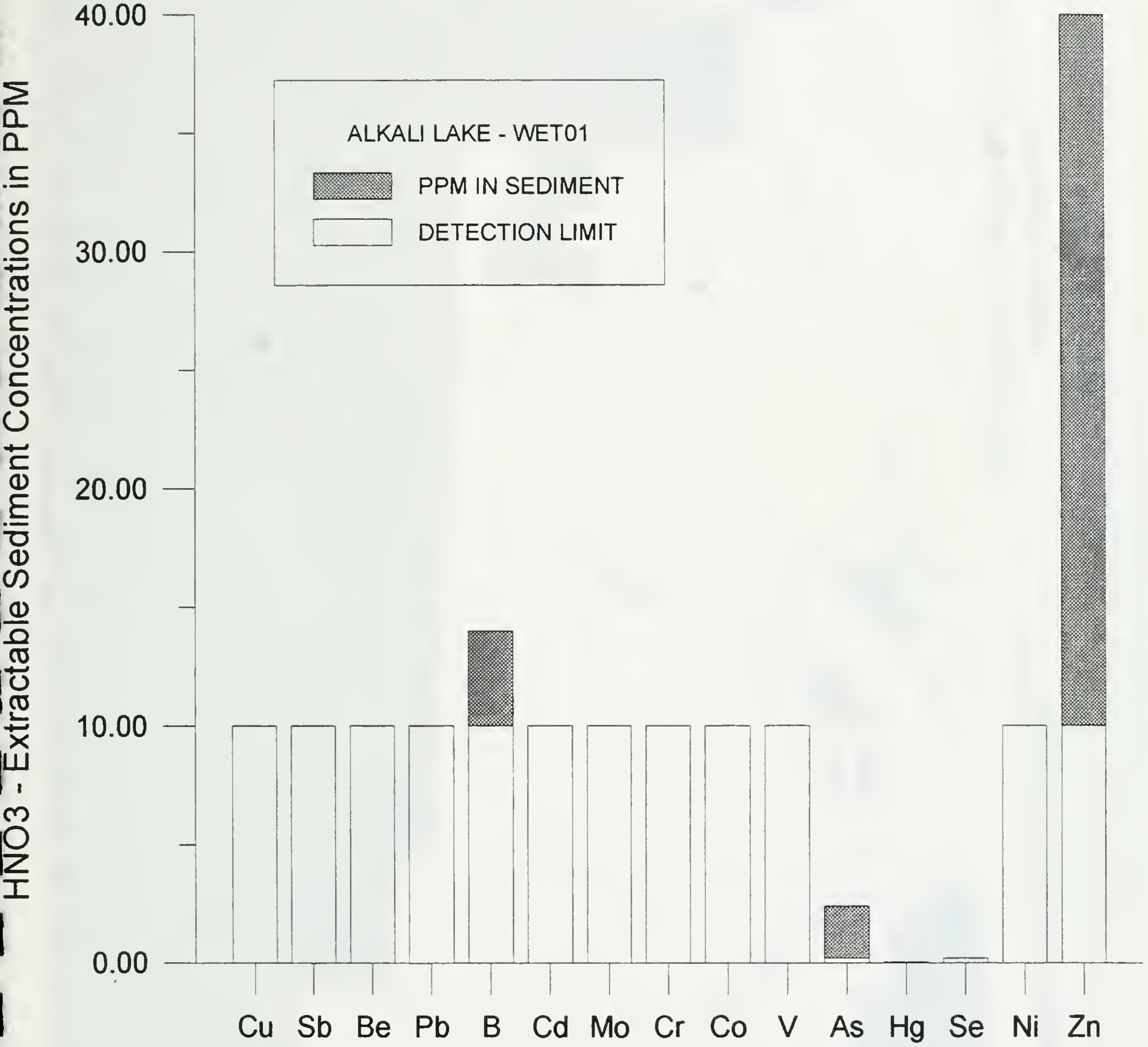
COE Hydrogeomorphic class:	FRINGE
Primary surficial geologic unit	112TILL
Primary bedrock geologic unit	400BELT

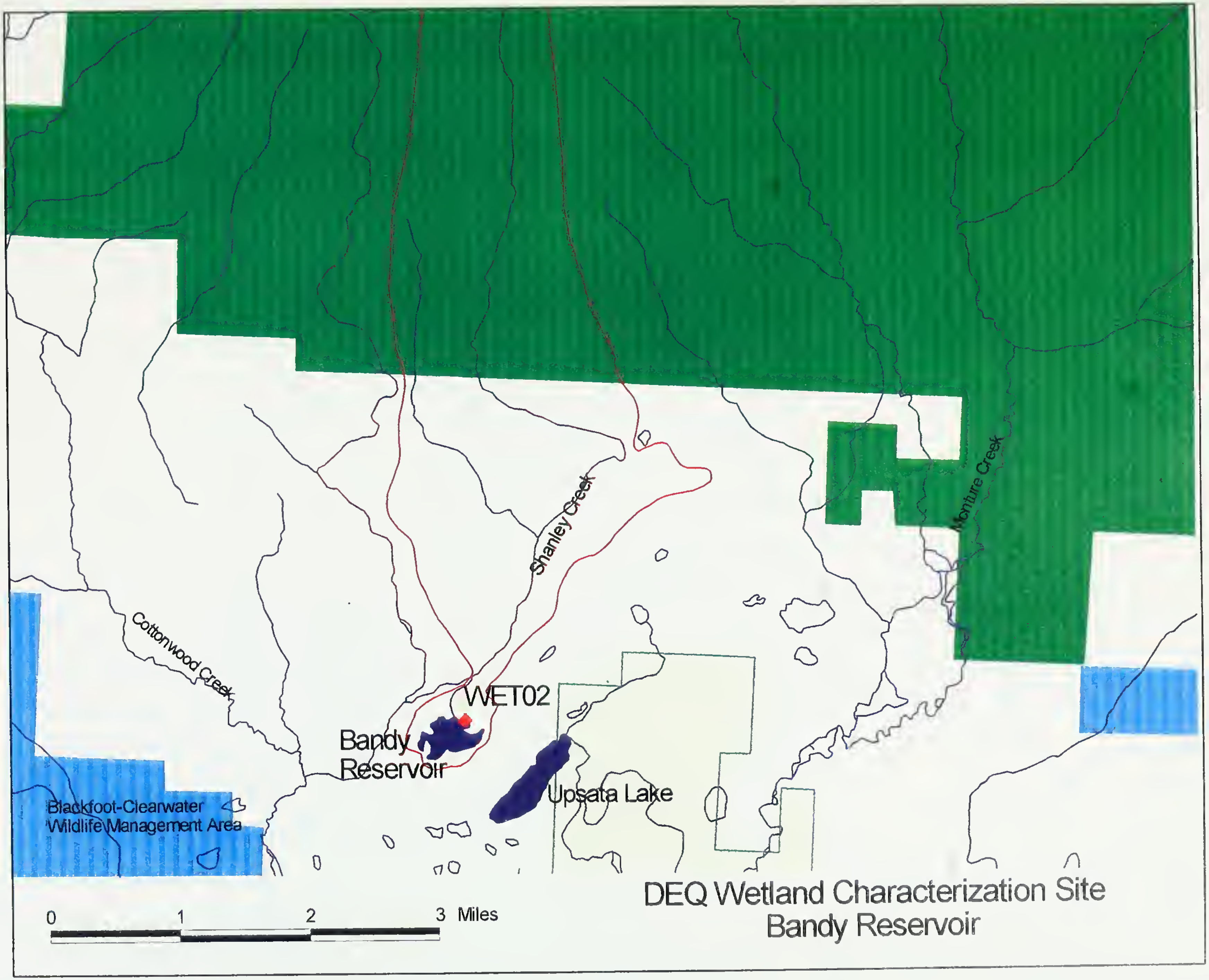

Total Annual Precipitation for Fortine
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
30.00
20.00
10.00
0.00
1910
1920
1930
1940
1950
1960
1970
1980
1990


Monthly Average, Maximum and Minimum Precipitation
Fortine
Inches Precipitation
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec



Concentrations in Milligrams per liter
0.020
0.016
0.012
0.008
0.004
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu
ALKALI LAKE - WET01
Total recoverable concentration in water
Detection limit


HNO3 - Extractable Sediment Concentrations in PPM
40.00
30.00
20.00
10.00
0.00
ALKALI LAKE - WET01
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Bandy Reservoir

Wetland: BANDY RESERVOIR
Site Code: WET02

7.5 Minute Quad: OVANDO
Lat: 47 5 2
Long: 113 13 58

Mean Annual Precipitation in Inches: 17.00

Mean Annual Potential Evaporation (Penman) in Inches: 32.00

'Net Precipitation' in Inches: -15.00

Site has a mapped surface inlet.

Site has a mapped surface outlet.

Site is artificially impounded.

Site has significant water imports.

Mapped area of wetland: 57 acres

Area of contributing drainage basin: 5900 acres

Mapped elevation of wetland surface: 4210 ft

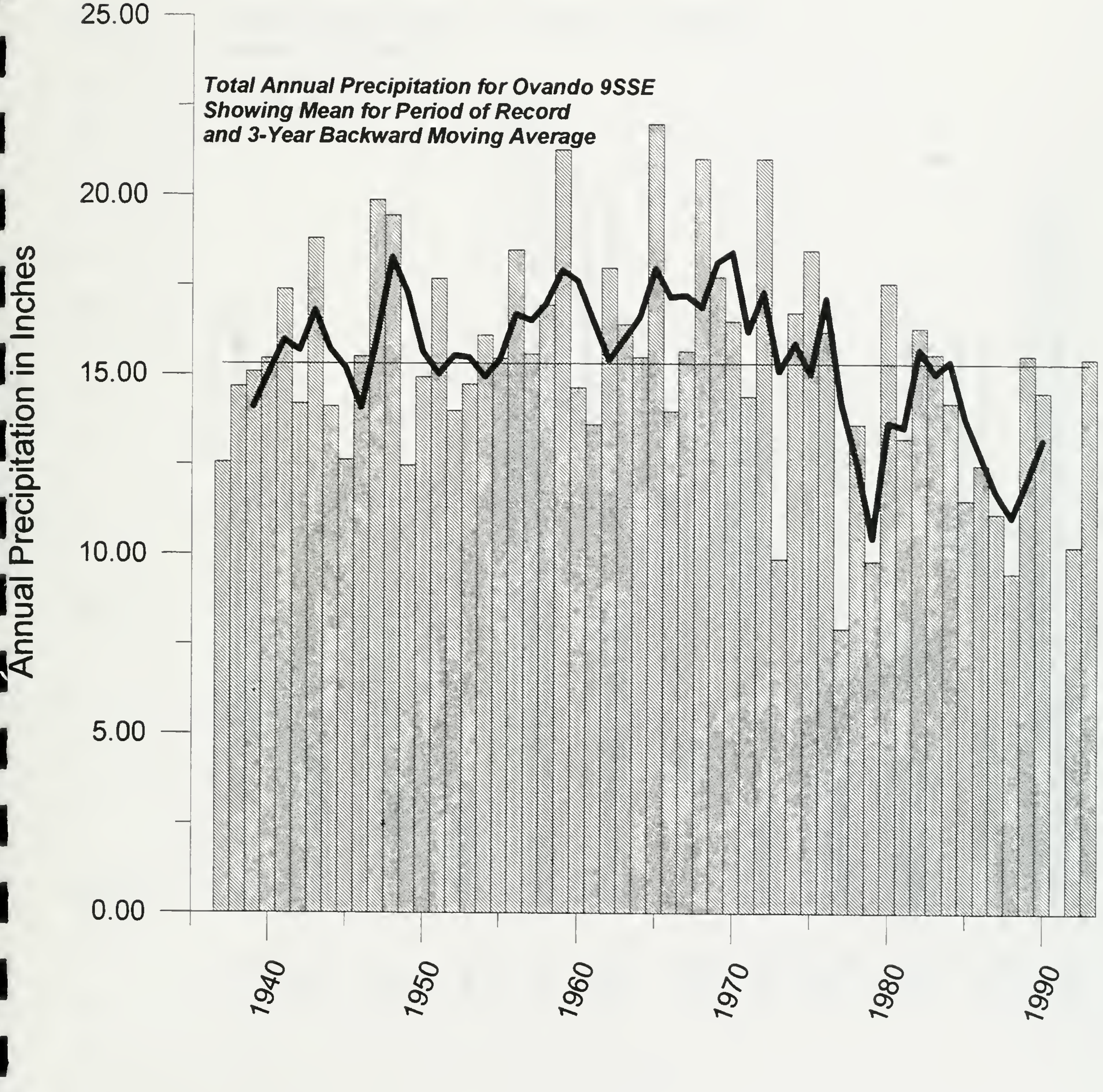
Maximum elevation within drainage basin: 4335 ft

Net relief of contributing basin: 125 ft

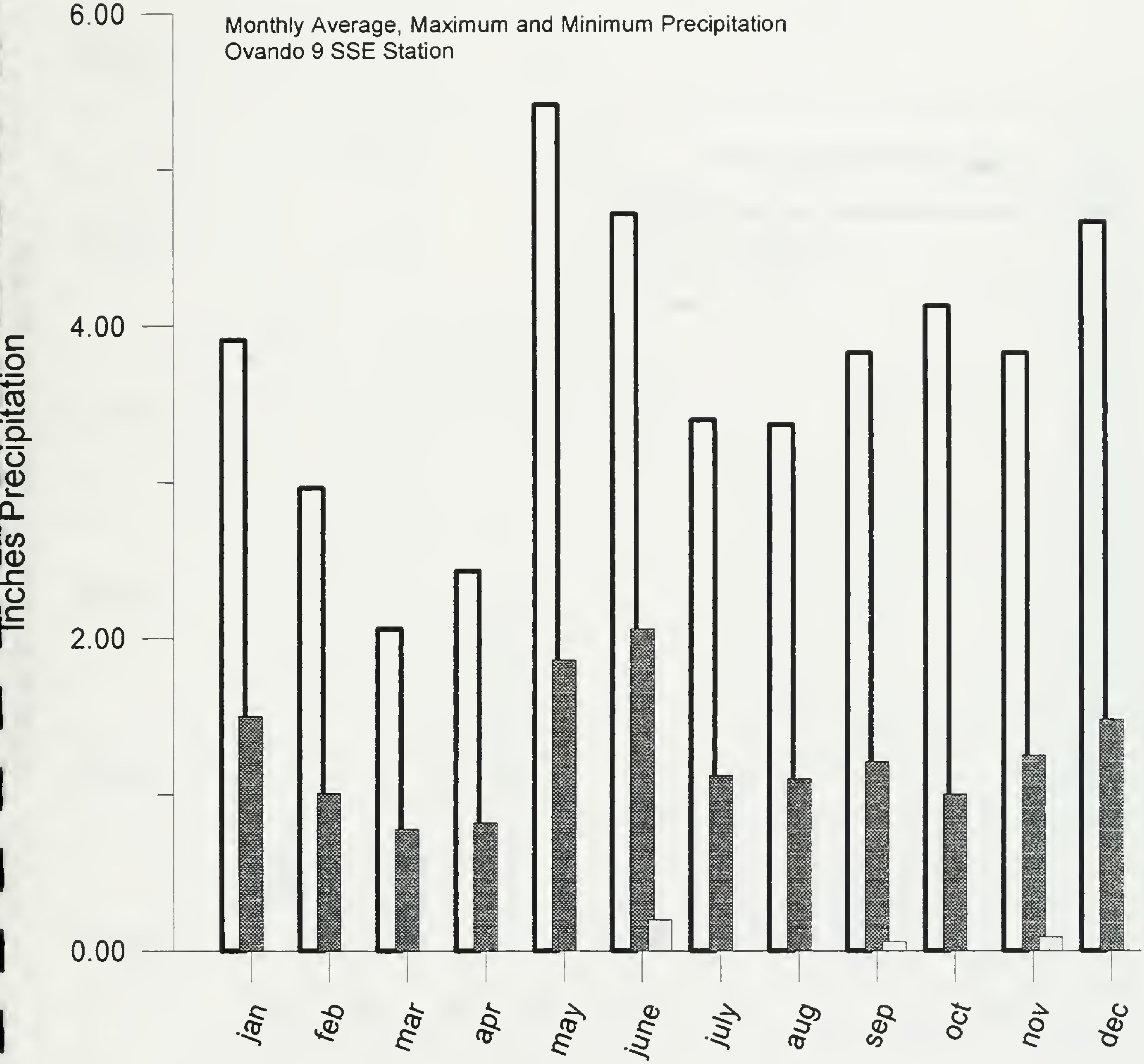
COE Hydrogeomorphic class: DEPRESSIONAL

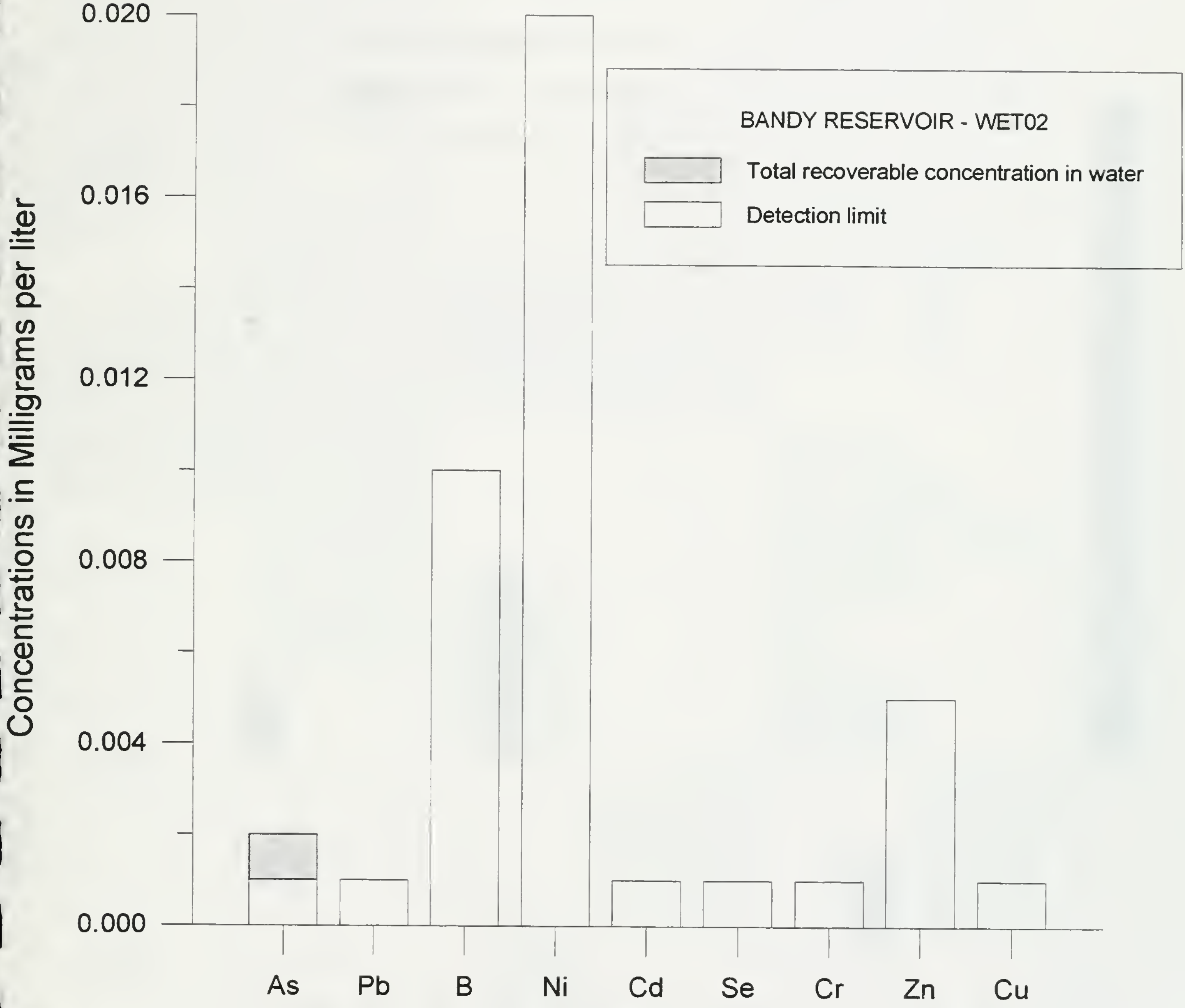
Primary surficial geologic unit 112TILL

Primary bedrock geologic unit 120SDMS

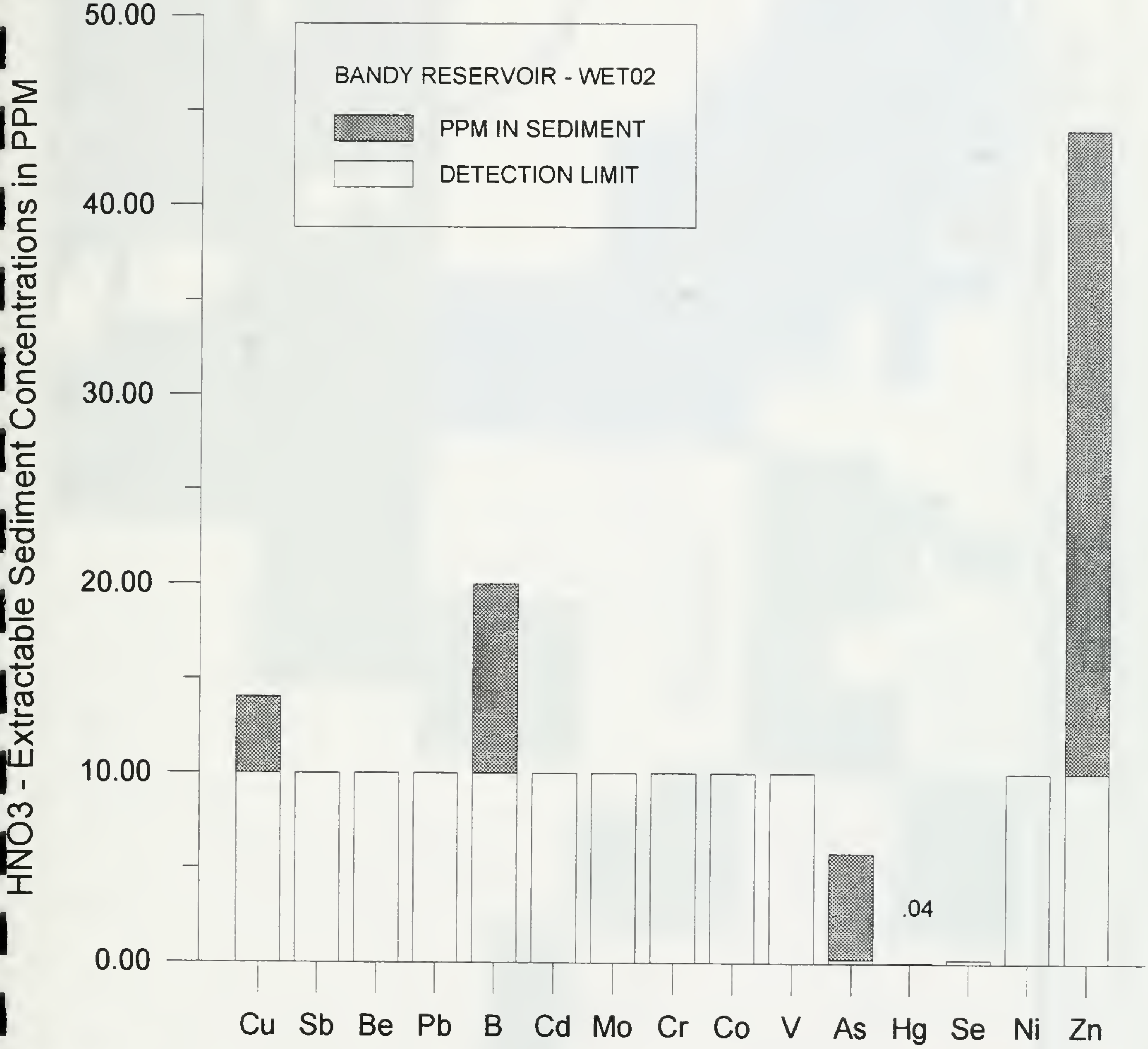


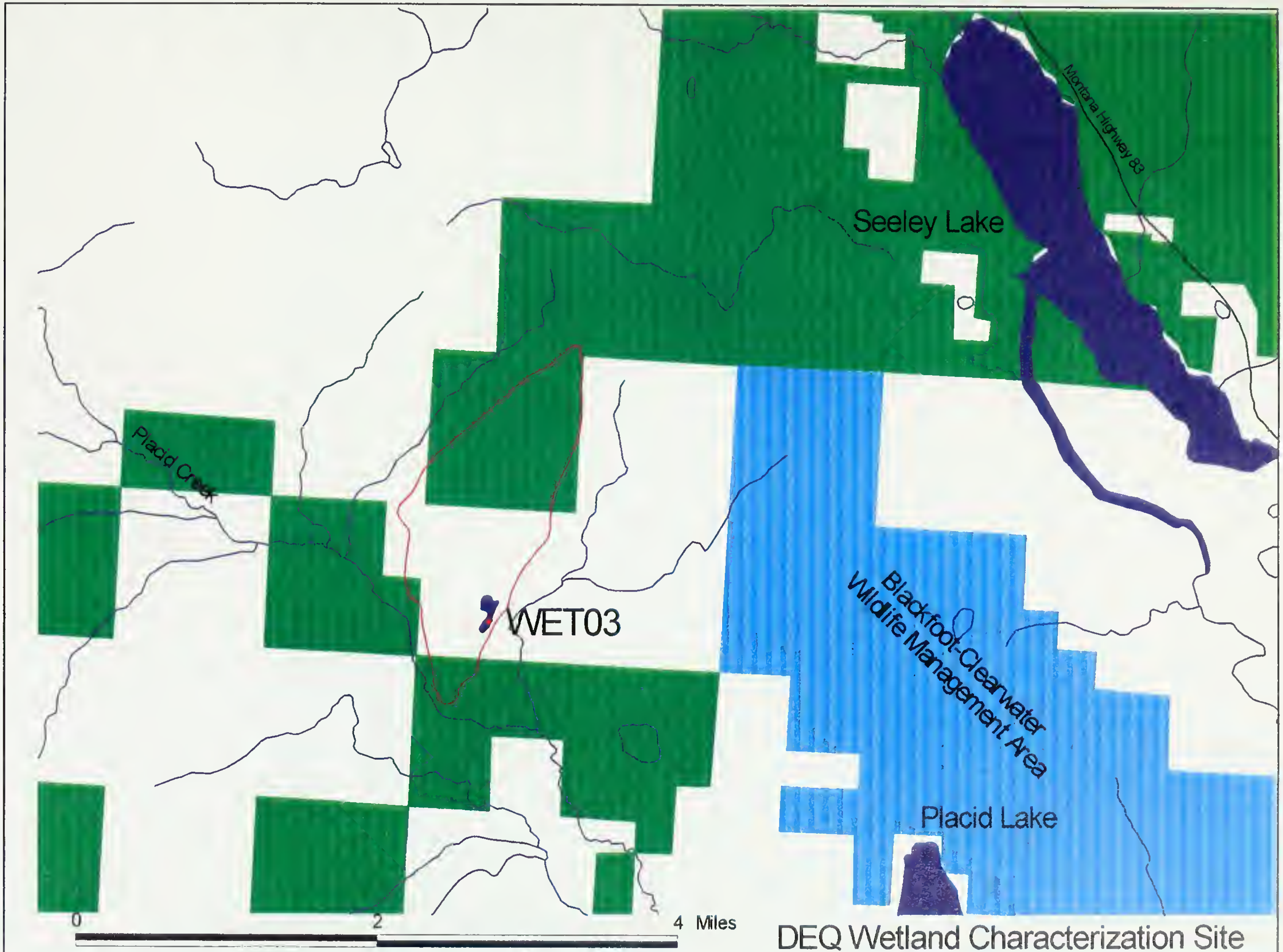
Total Annual Precipitation for Ovando 9SSE
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1940
1950
1960
1970
1980
1990


Monthly Average, Maximum and Minimum Precipitation
Ovando 9 SSE Station



Concentrations in Milligrams per liter
0.020
0.016
0.012
0.008
0.004
0.000
BANDY RESERVOIR - WET02
Total recoverable concentration in water
Detection limit
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


BANDY RESERVOIR - WET02
▨ PPM IN SEDIMENT
☐ DETECTION LIMIT
HNO3 - Extractable Sediment Concentrations in PPM
50.00
40.00
30.00
20.00
10.00
0.00
.04
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Beaver Creek

Wetland: BEAVER CREEK WETLAND	Site Code: WET03
7.5 Minute Quad: SEELEY LAKE WEST	Lat: 47 9 15 Long: 113 35 20

Mean Annual Precipitation in Inches:	25.00
Mean Annual Potential Evaporation (Penman) in Inches:	31.00
'Net Precipitation' in Inches:	-6.00

Site does not have a mapped surface inlet.

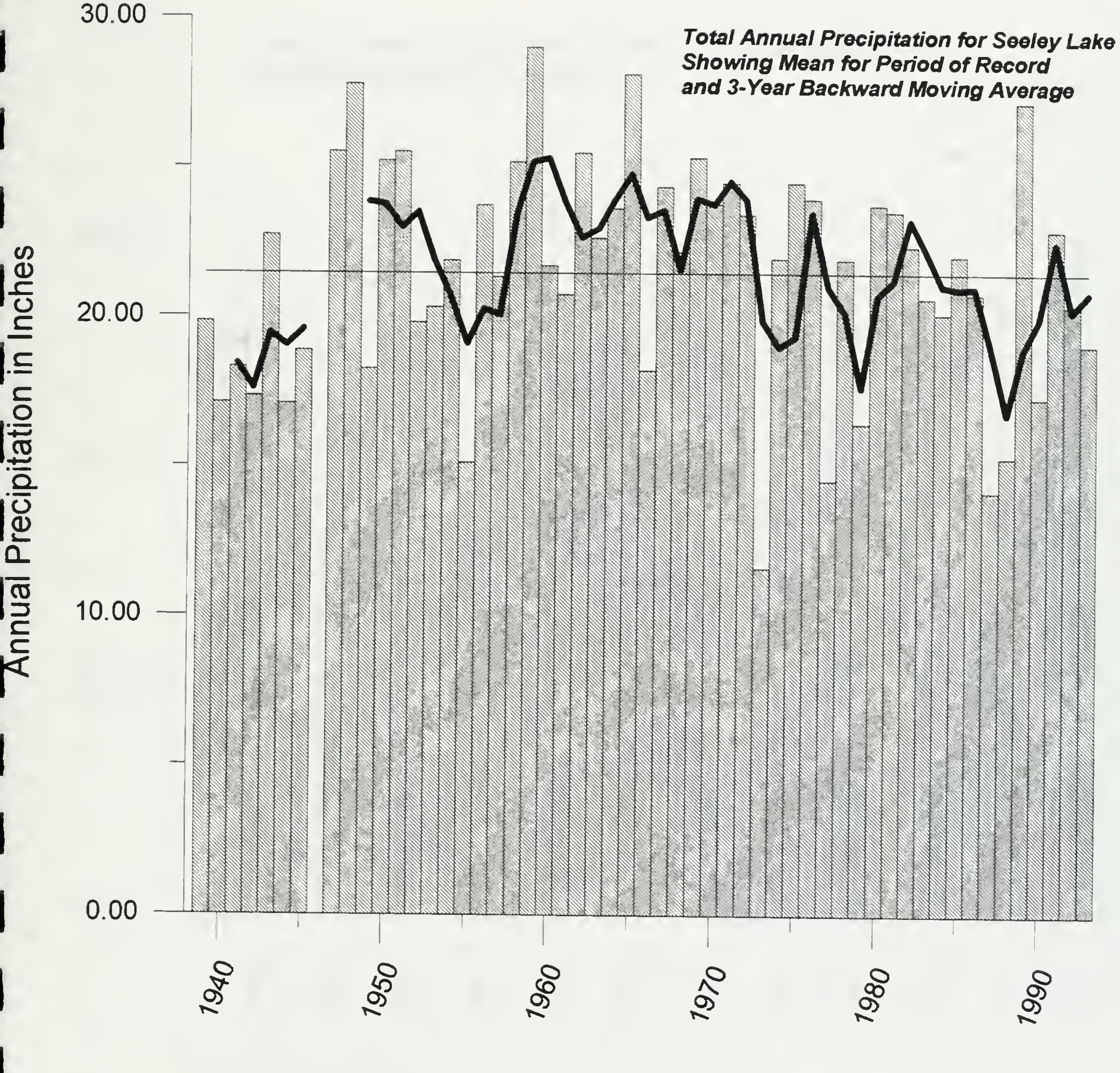
Site does not have a mapped surface outlet.

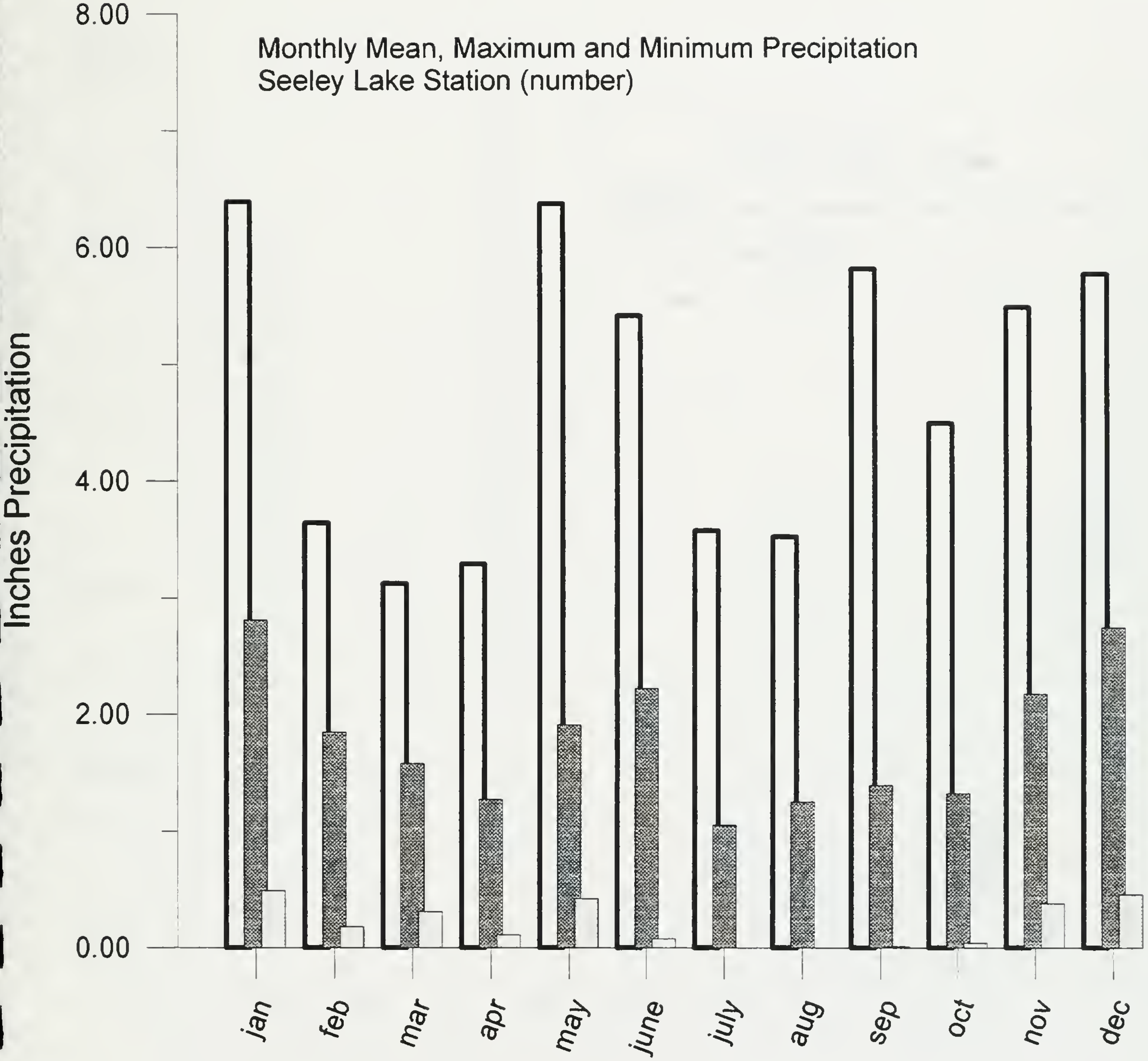
Site is not known to be artificially impounded.

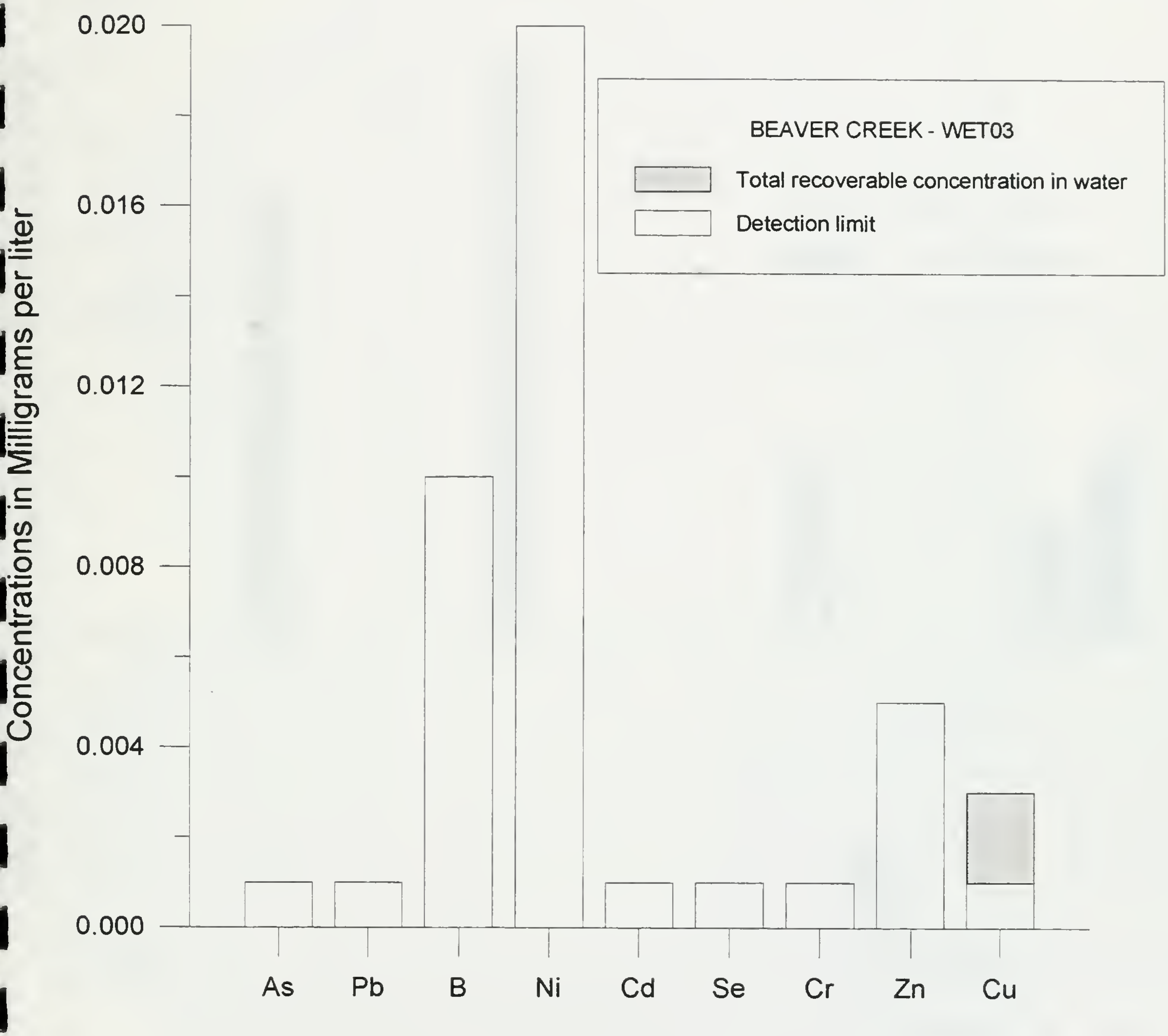
Site does not have known significant water imports.

Mapped area of wetland:	10 acres
Area of contributing drainage basin:	930 acres
Mapped elevation of wetland surface:	4275 ft
Maximum elevation within drainage basin:	4465 ft
Net relief of contributing basin:	190 ft

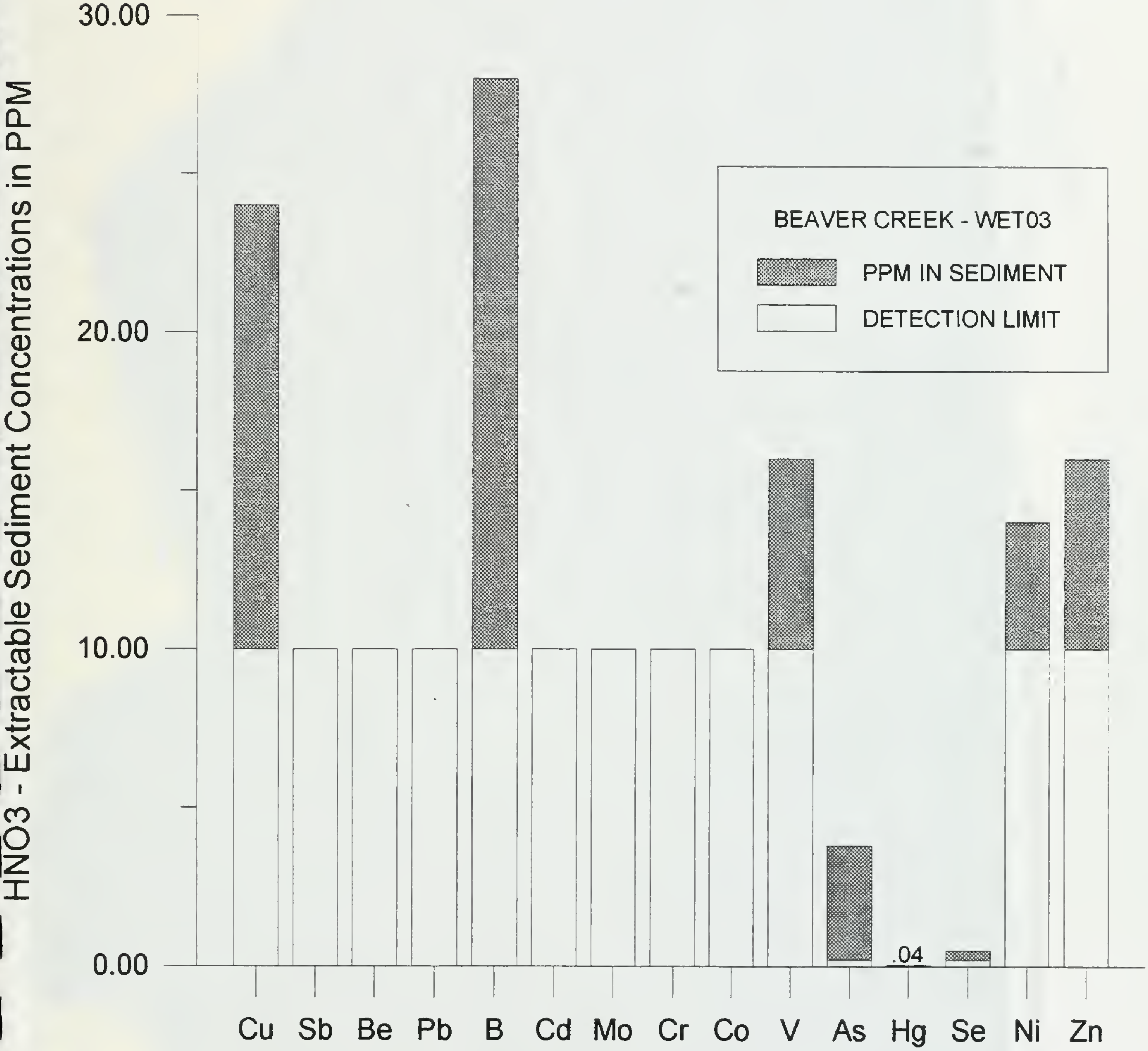
COE Hydrogeomorphic class:	DEPRESSIONAL
Primary surficial geologic unit	112DRFT
Primary bedrock geologic unit	400BELT

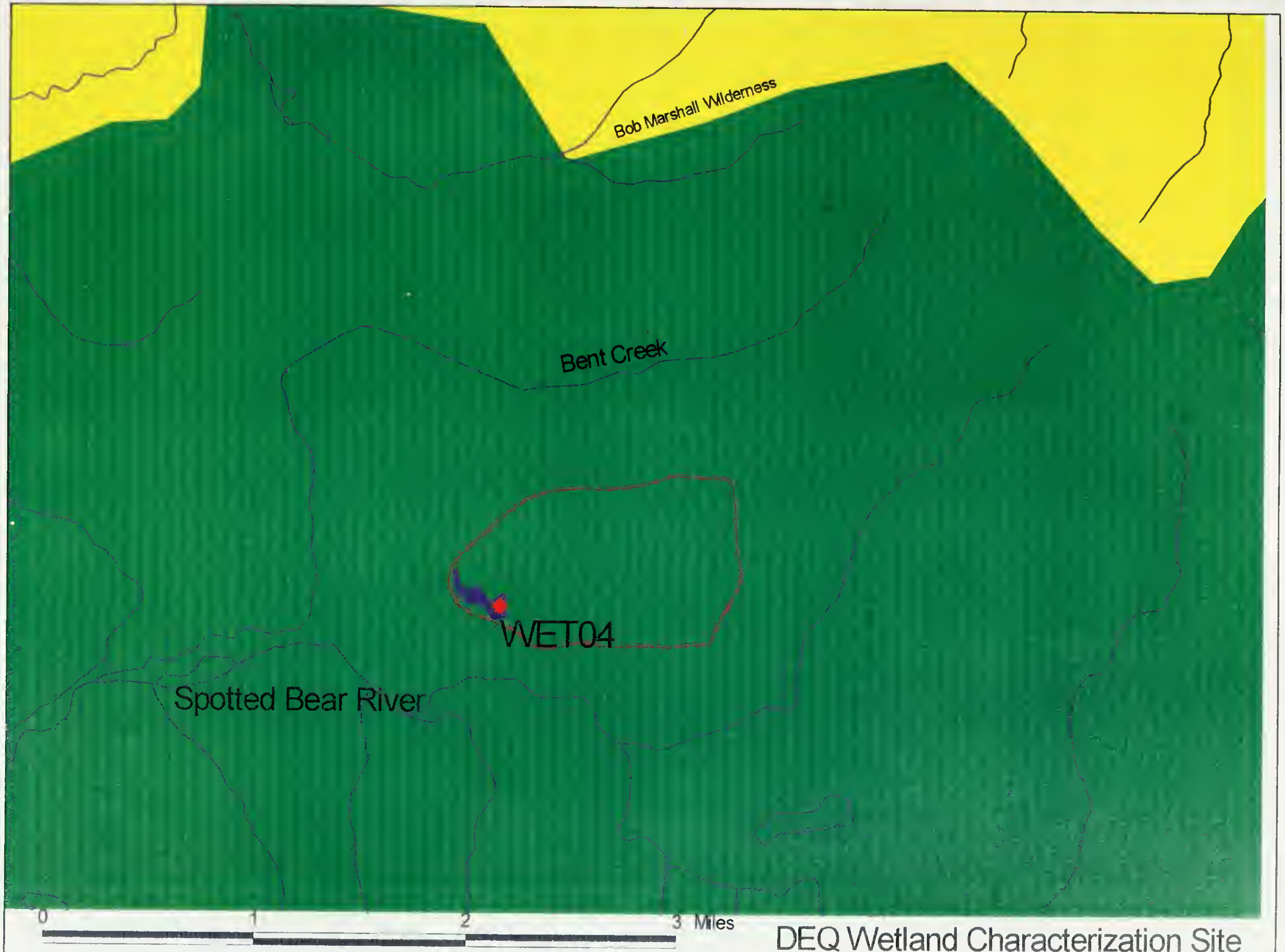

Total Annual Precipitation for Seeley Lake
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
30.00
20.00
10.00
0.00
1940
1950
1960
1970
1980
1990


8.00
6.00
4.00
2.00
0.00
Inches Precipitation
Monthly Mean, Maximum and Minimum Precipitation
Seeley Lake Station (number)
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec



BEAVER CREEK - WET03
Total recoverable concentration in water
Detection limit
Concentrations in Milligrams per liter
0.020
0.016
0.012
0.008
0.004
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
30.00
20.00
10.00
0.00
BEAVER CREEK - WET03
PPM IN SEDIMENT
DETECTION LIMIT
.04
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Bent Flat Fen

Wetland: BENT FLAT FEN PROPOSED RNA	Site Code: WET04
7.5 Minute Quad: SPOTTED BEAR MOUNTAIN	Lat: 47 56 45 Long: 113 26 55

Mean Annual Precipitation in Inches:	25.00
Mean Annual Potential Evaporation (Penman) in Inches:	29.00
'Net Precipitation' in Inches:	-4.00

Site has a mapped surface inlet.

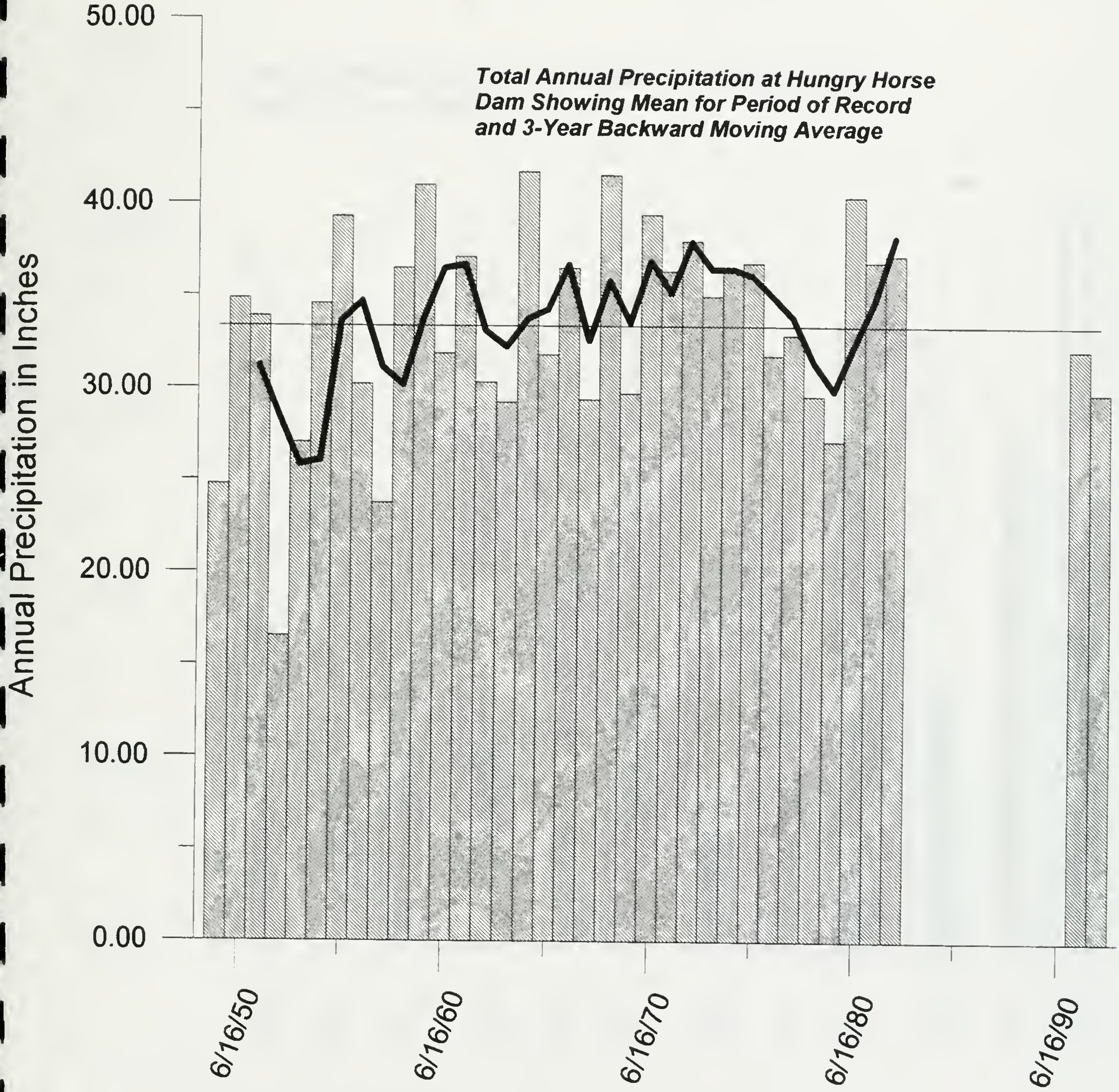
Site has a mapped surface outlet.

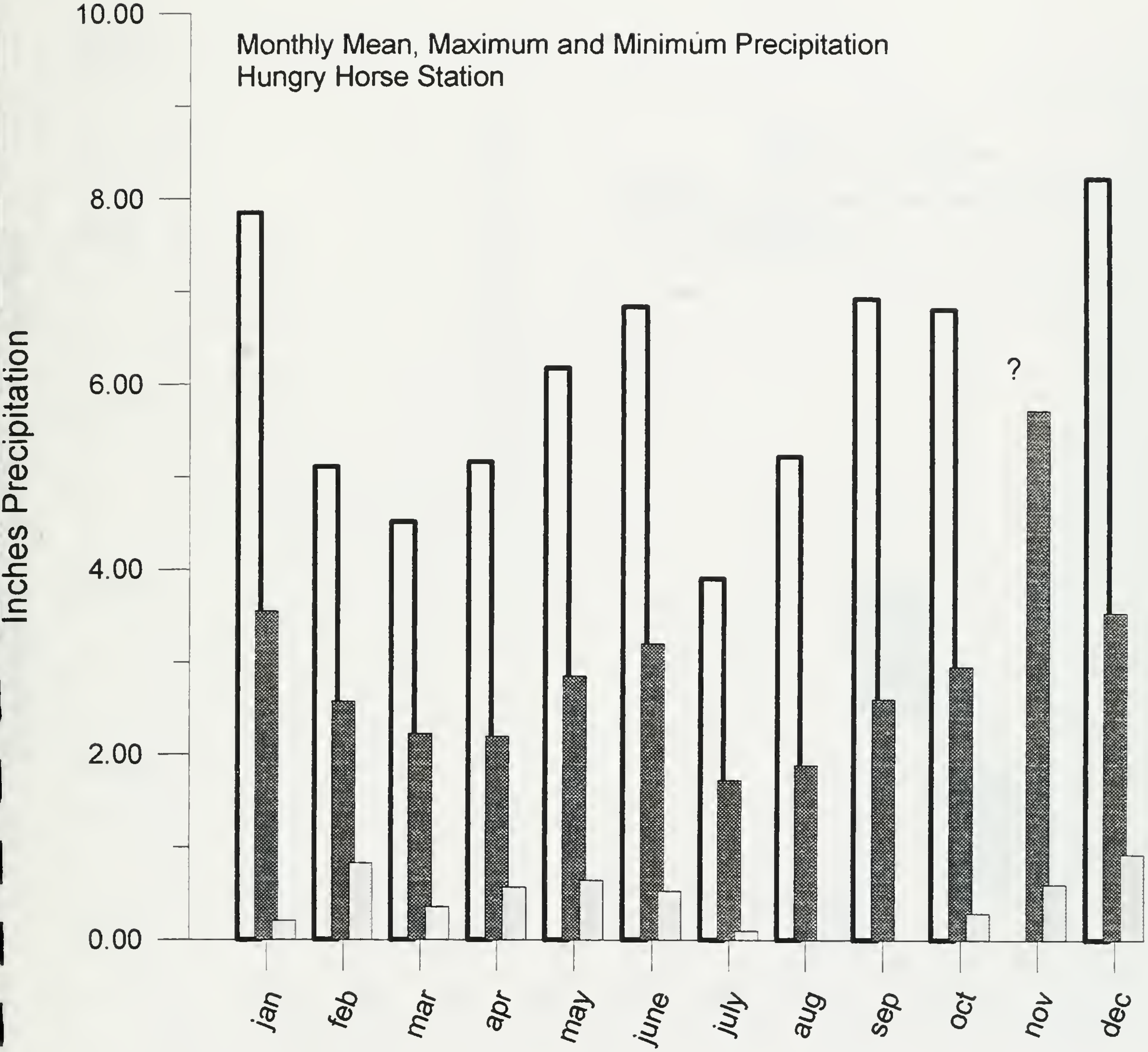
Site is not known to be artificially impounded.

Site does not have known significant water imports.

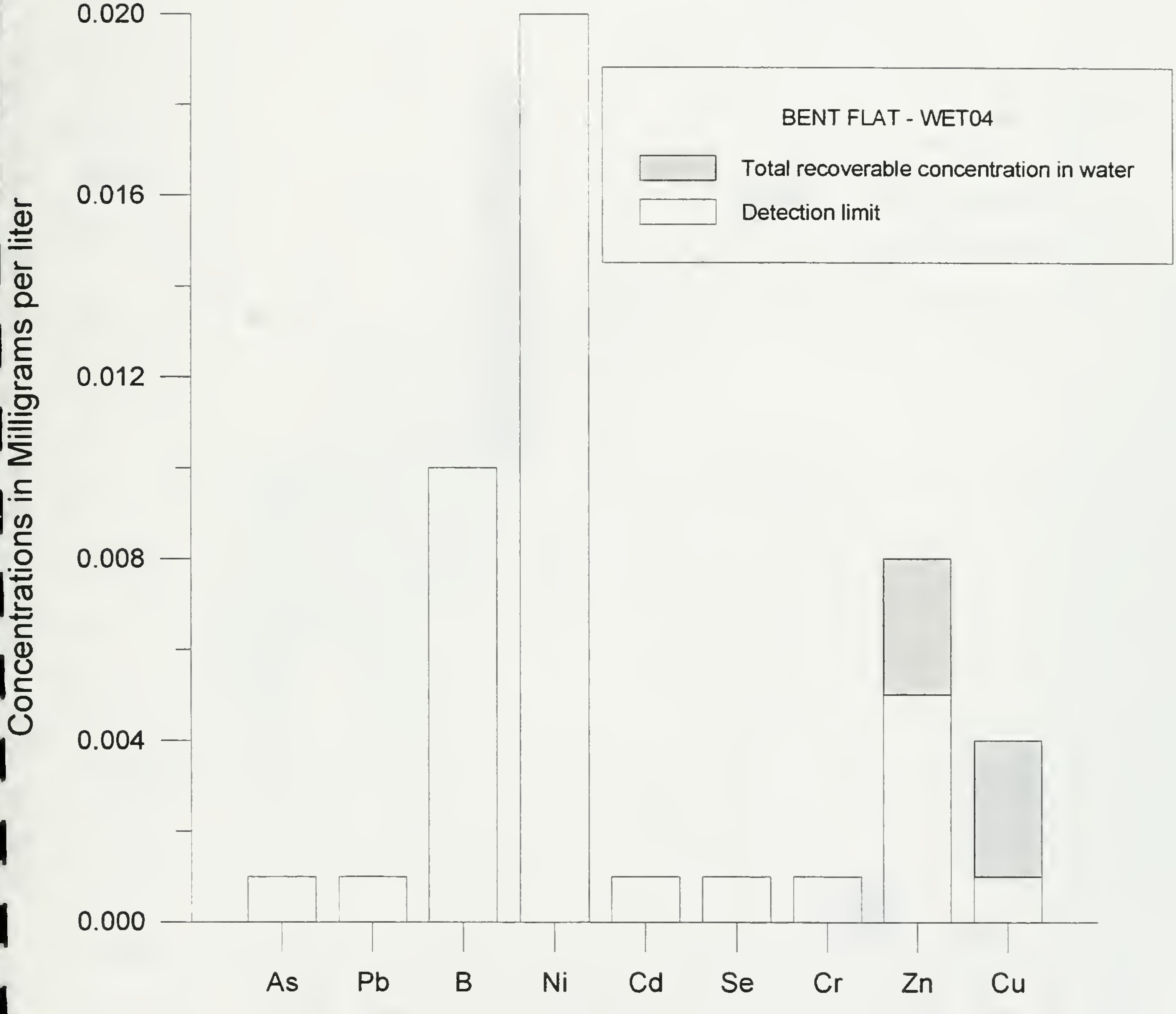
Mapped area of wetland:	12 acres
Area of contributing drainage basin:	570 acres
Mapped elevation of wetland surface:	3980 ft
Maximum elevation within drainage basin:	6004 ft
Net relief of contributing basin:	2024 ft

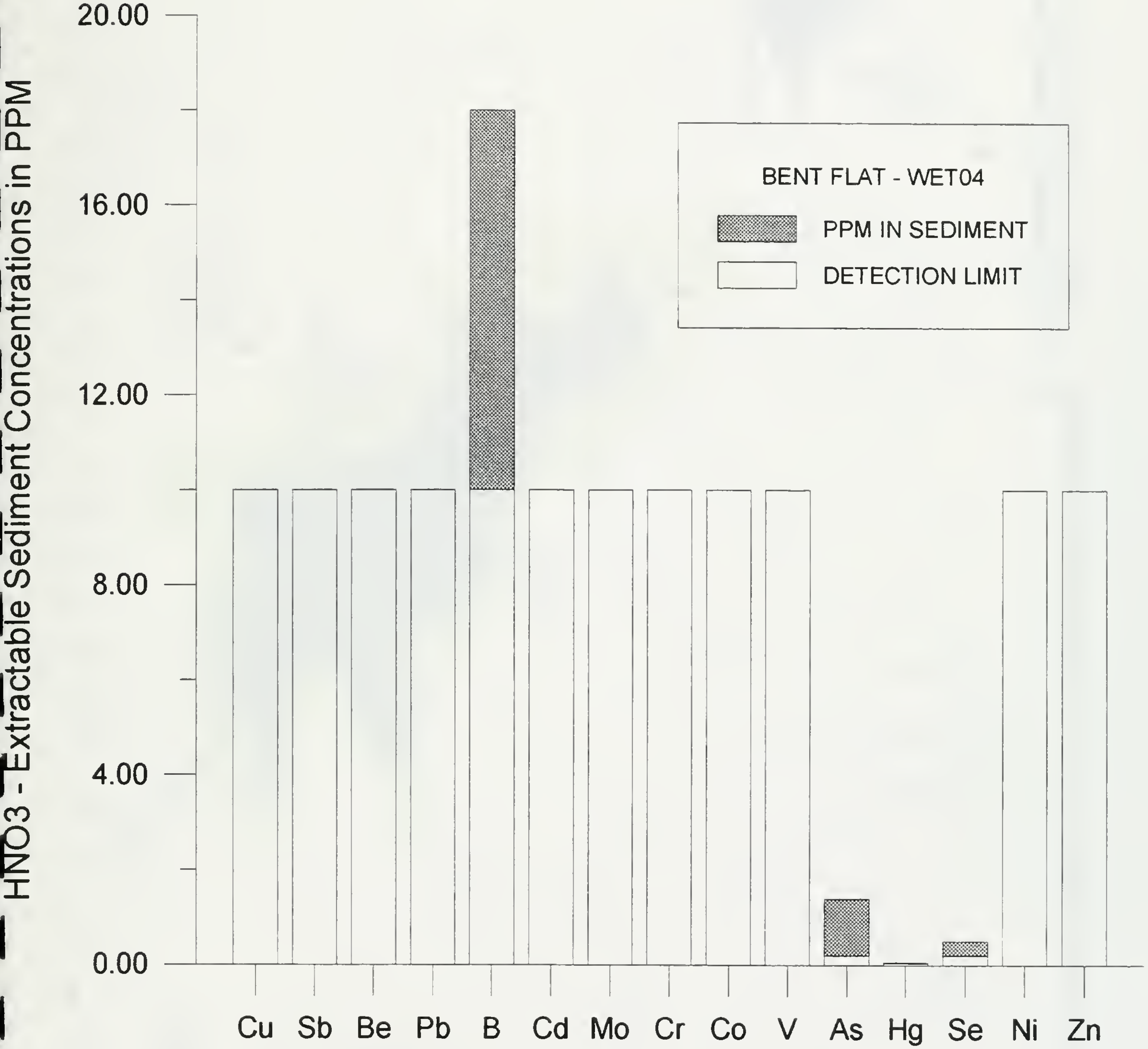
COE Hydrogeomorphic class:	EXTENS PEAT
Primary surficial geologic unit	112TILL
Primary bedrock geologic unit	370CMBR

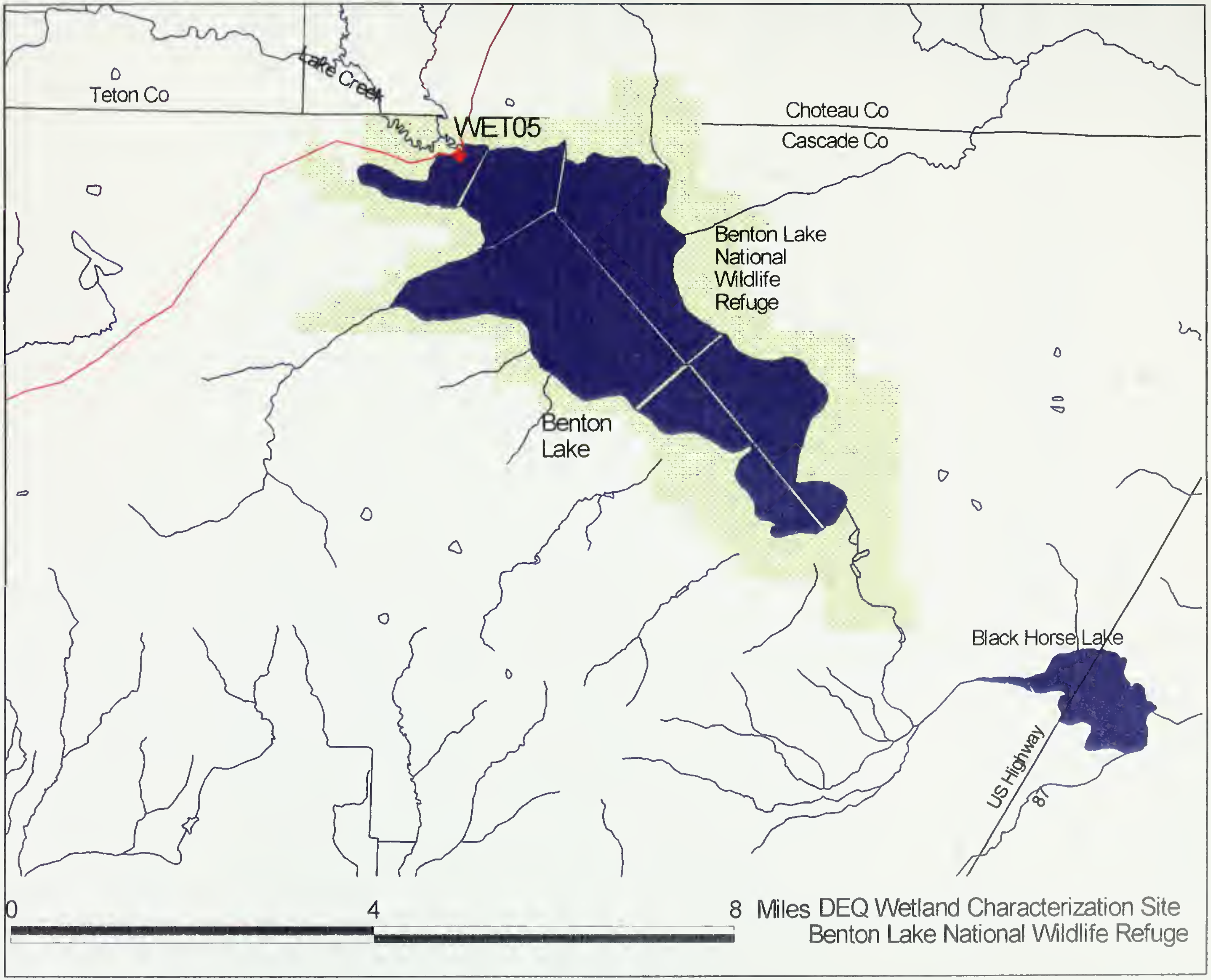

Total Annual Precipitation at Hungry Horse Dam Showing Mean for Period of Record and 3-Year Backward Moving Average
Annual Precipitation in Inches
50.00
40.00
30.00
20.00
10.00
0.00
6/16/50
6/16/60
6/16/70
6/16/80
6/16/90



Monthly Mean, Maximum and Minimum Precipitation
Hungry Horse Station


BENT FLAT - WET04
Total recoverable concentration in water
Detection limit
Concentrations in Milligrams per liter
0.020
0.016
0.012
0.008
0.004
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
20.00
16.00
12.00
8.00
4.00
0.00
BENT FLAT - WET04
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Benton Lake National Wildlife Refuge

Wetland: BENTON LAKE	Site Code: WET05
7.5 Minute Quad: BENTON LAKE EAST	Lat: 47 41 45 Long: 111 22 15

Mean Annual Precipitation in Inches:	13.00
Mean Annual Potential Evaporation (Penman) in Inches:	40.00
'Net Precipitation' in Inches:	-27.00

Site has a mapped surface inlet.

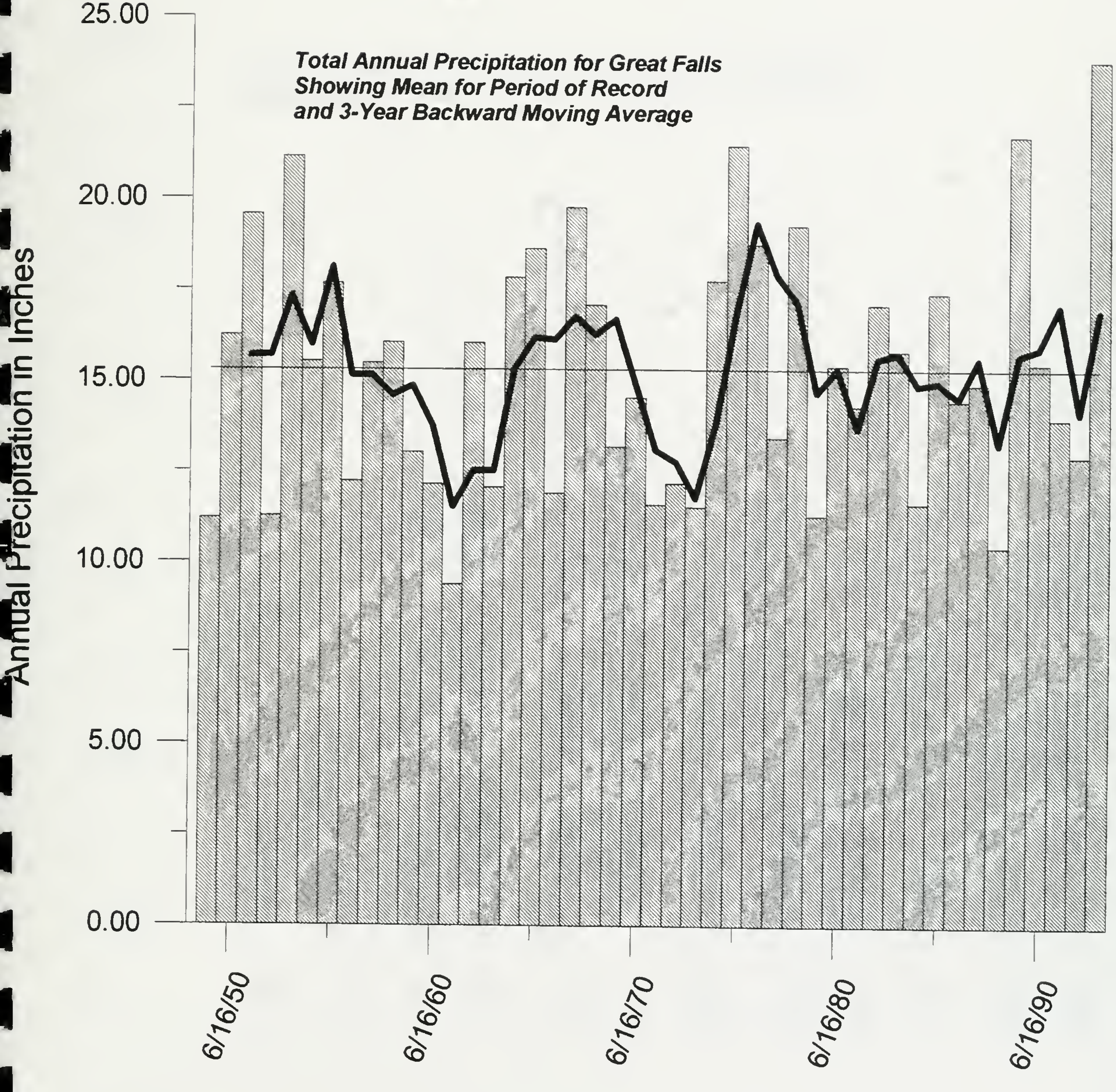
Site does not have a mapped surface outlet.

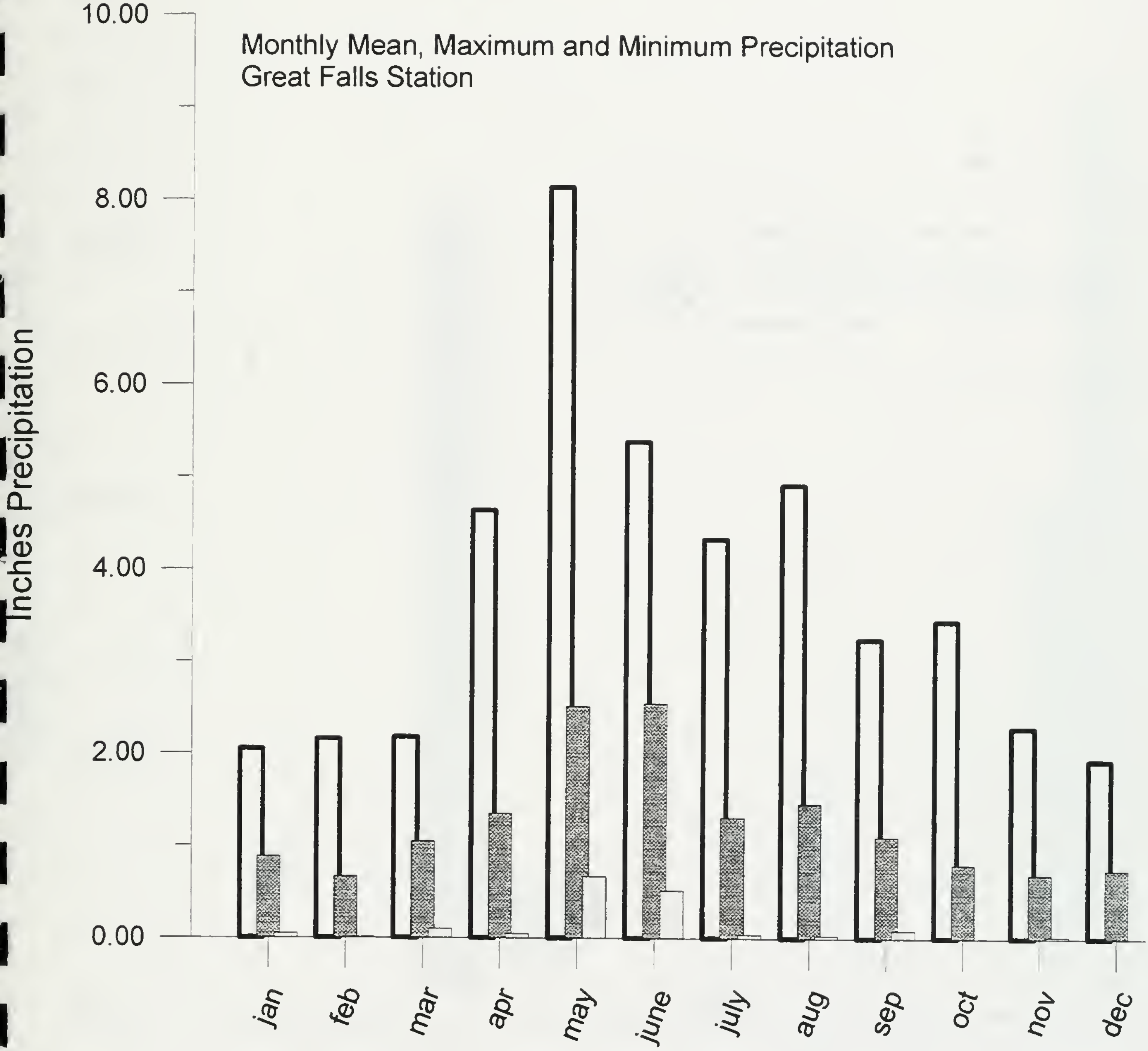
Site is artificially impounded.

Site has significant water imports.

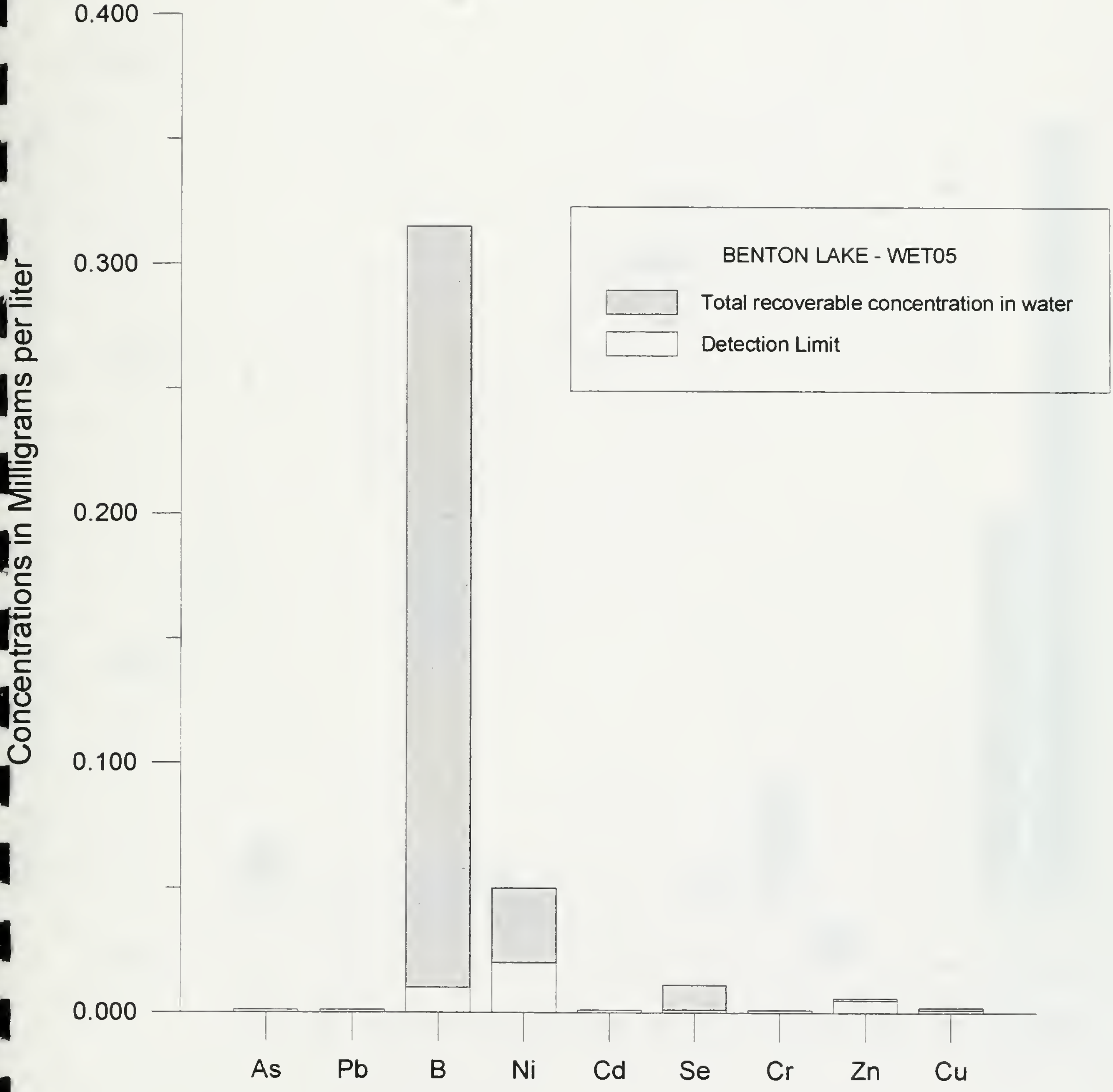
Mapped area of wetland:	5300 acres
Area of contributing drainage basin:	54040 acres
Mapped elevation of wetland surface:	3620 ft
Maximum elevation within drainage basin:	3950 ft
Net relief of contributing basin:	330 ft

COE Hydrogeomorphic class:	FRINGE
Primary surficial geologic unit	112GLCC
Primary bedrock geologic unit	211CLRD

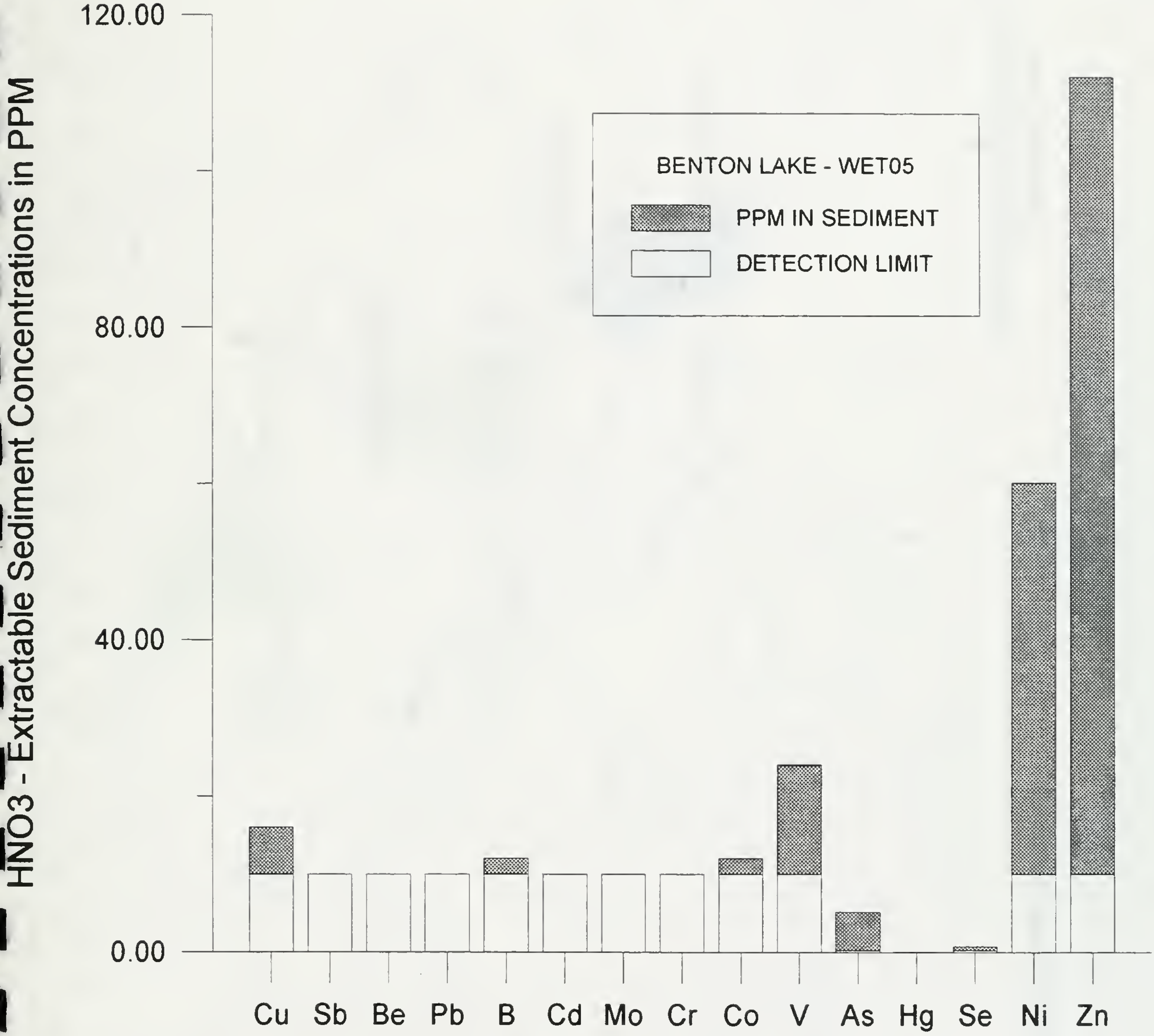

Total Annual Precipitation for Great Falls
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
6/16/50
6/16/60
6/16/70
6/16/80
6/16/90

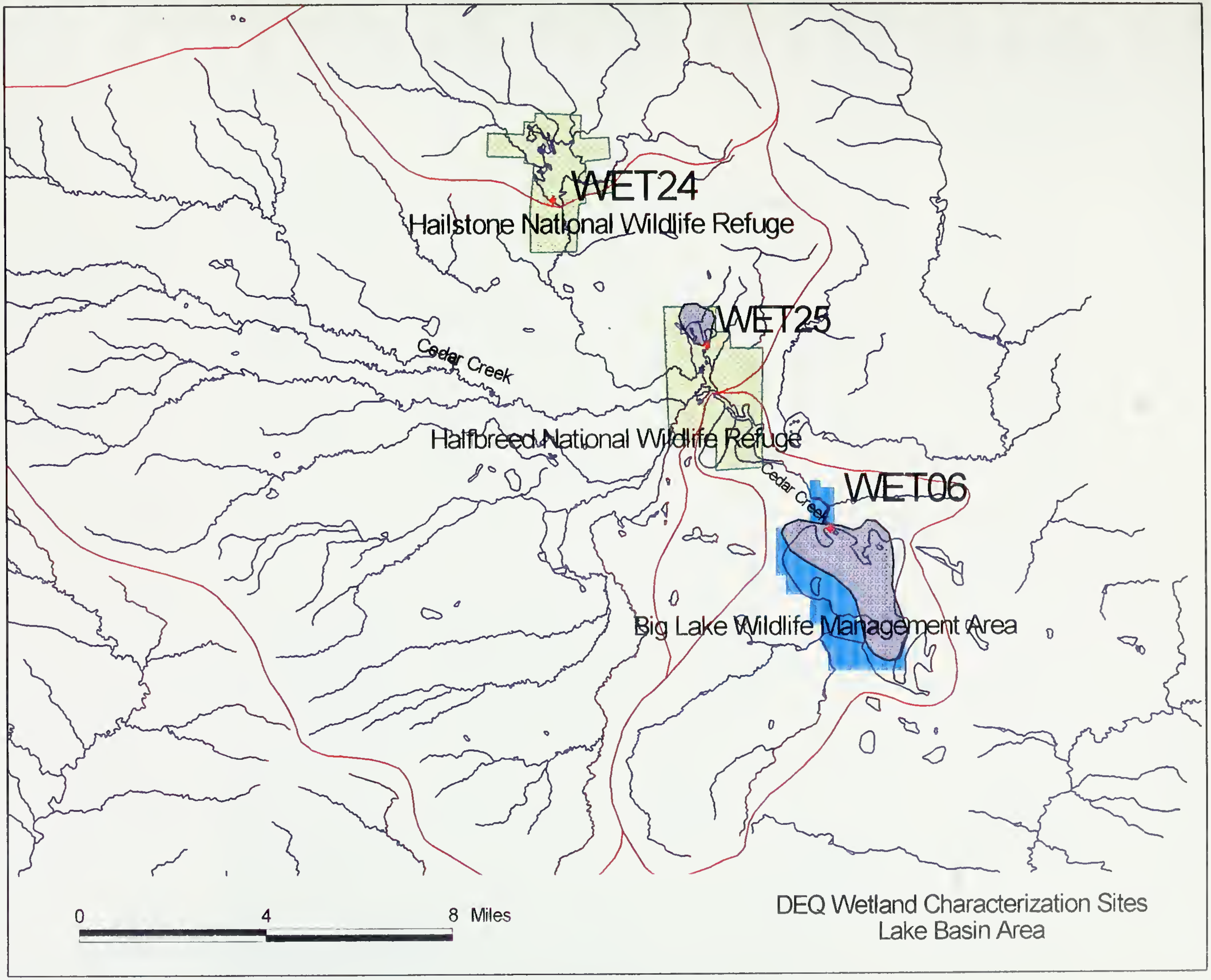


Monthly Mean, Maximum and Minimum Precipitation
Great Falls Station



Concentrations in Milligrams per liter
0.400
0.300
0.200
0.100
0.000
BENTON LAKE - WET05
Total recoverable concentration in water
Detection Limit
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
120.00
80.00
40.00
0.00
BENTON LAKE - WET05
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn


WET24
Hailstone National Wildlife Refuge
WET25
Cedar Creek
Halfbreed National Wildlife Refuge
Cedar Creek
WET06
Big Lake Wildlife Management Area
0
4
8 Miles

DEQ Wetland Characterization Sites
Lake Basin Area

Wetland: BIG LAKE

Site Code: WET06

7.5 Minute Quad: WHEAT BASIN

Lat: 45 54 5
Long: 109 3 35

Mean Annual Precipitation in Inches: 13.00

Mean Annual Potential Evaporation (Penman) in Inches: 41.00

'Net Precipitation' in Inches: -28.00

Site has a mapped surface inlet.

Site does not have a mapped surface outlet.

Site is artificially impounded.

Site does not have known significant water imports.

Mapped area of wetland: 3081 acres

Area of contributing drainage basin: 24420 acres

Mapped elevation of wetland surface: 3148 ft

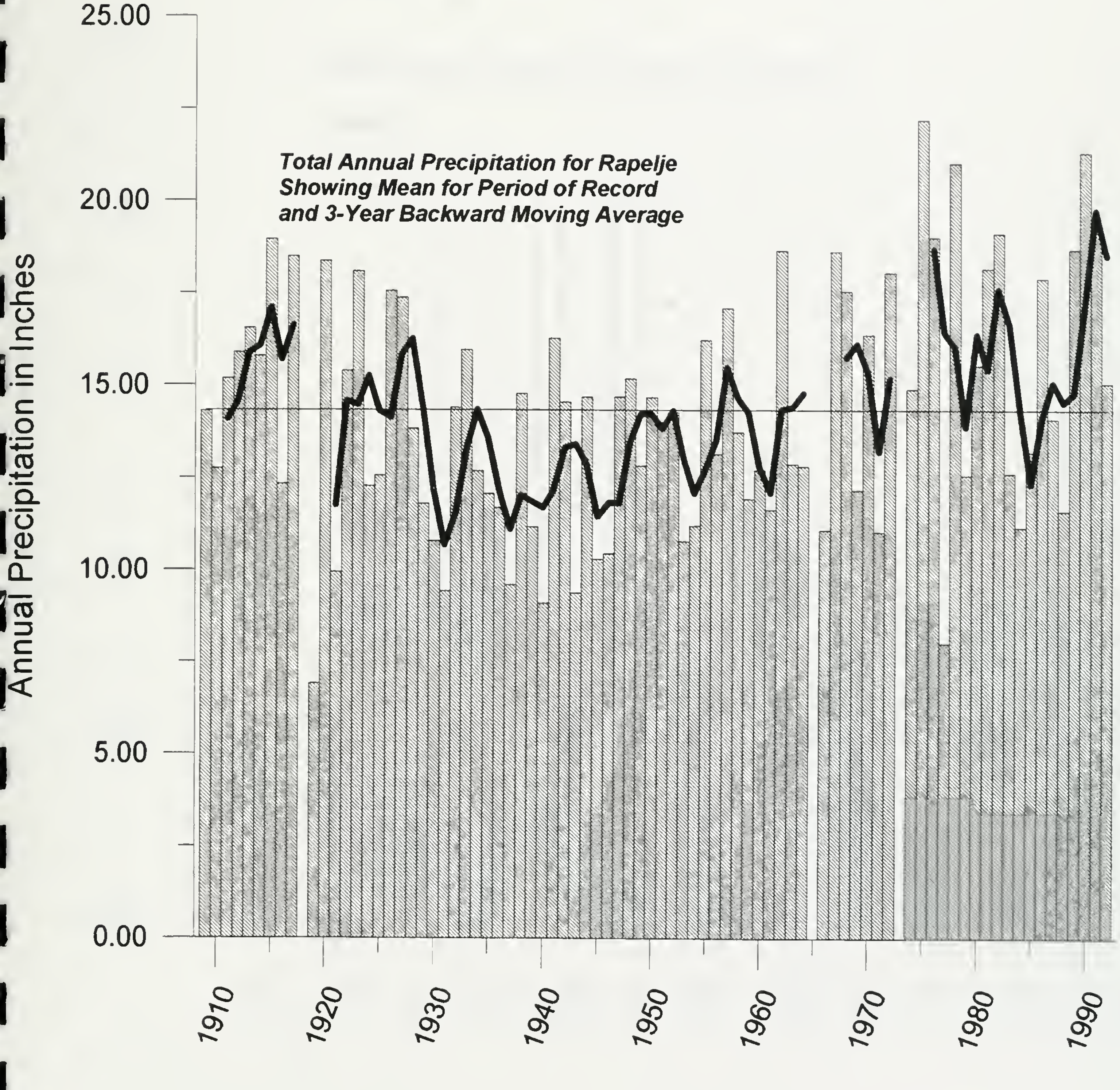
Maximum elevation within drainage basin: 5200 ft

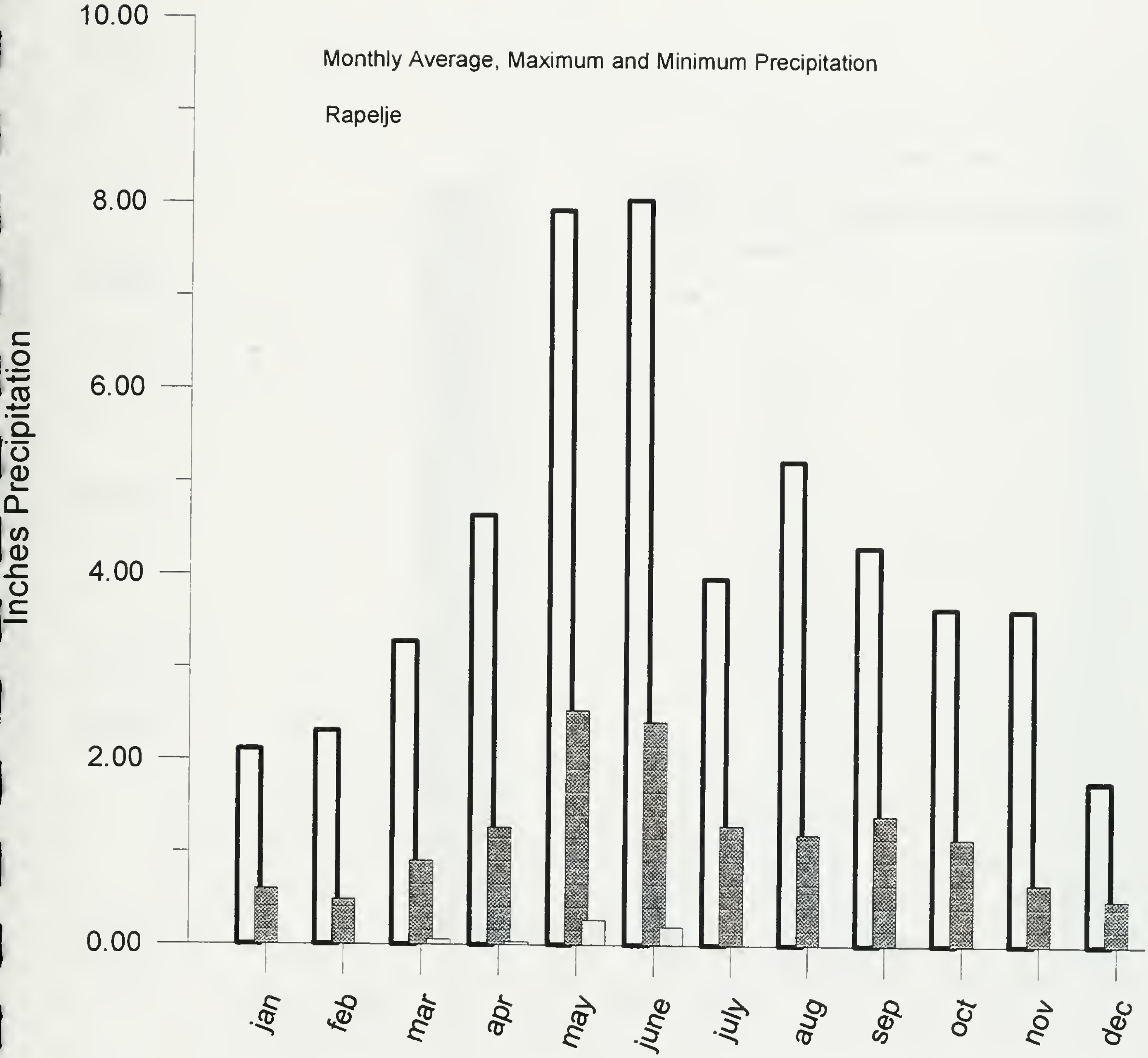
Net relief of contributing basin: 2052 ft

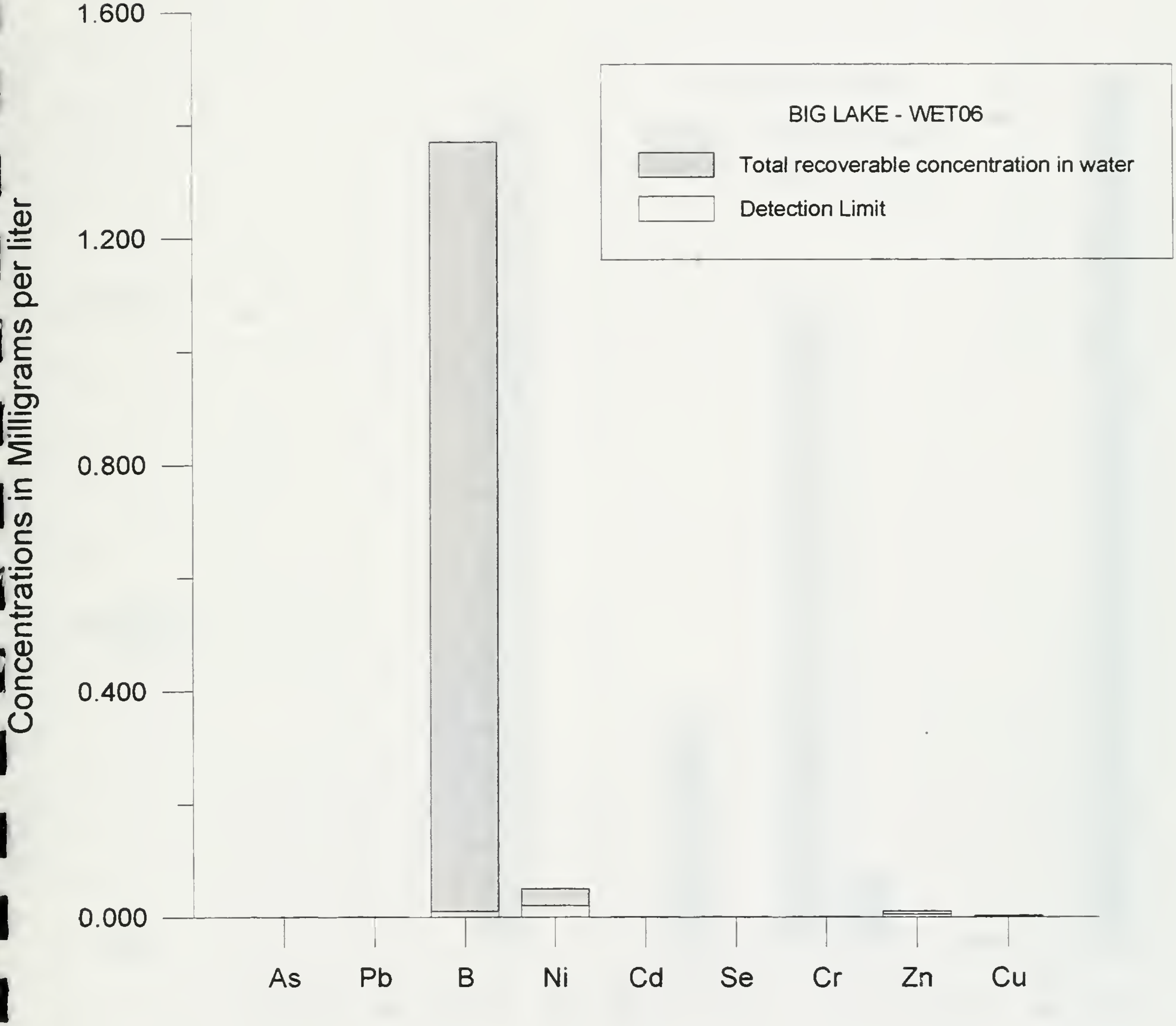
COE Hydrogeomorphic class: DEPRESSIONAL

Primary surficial geologic unit 110"LAC"

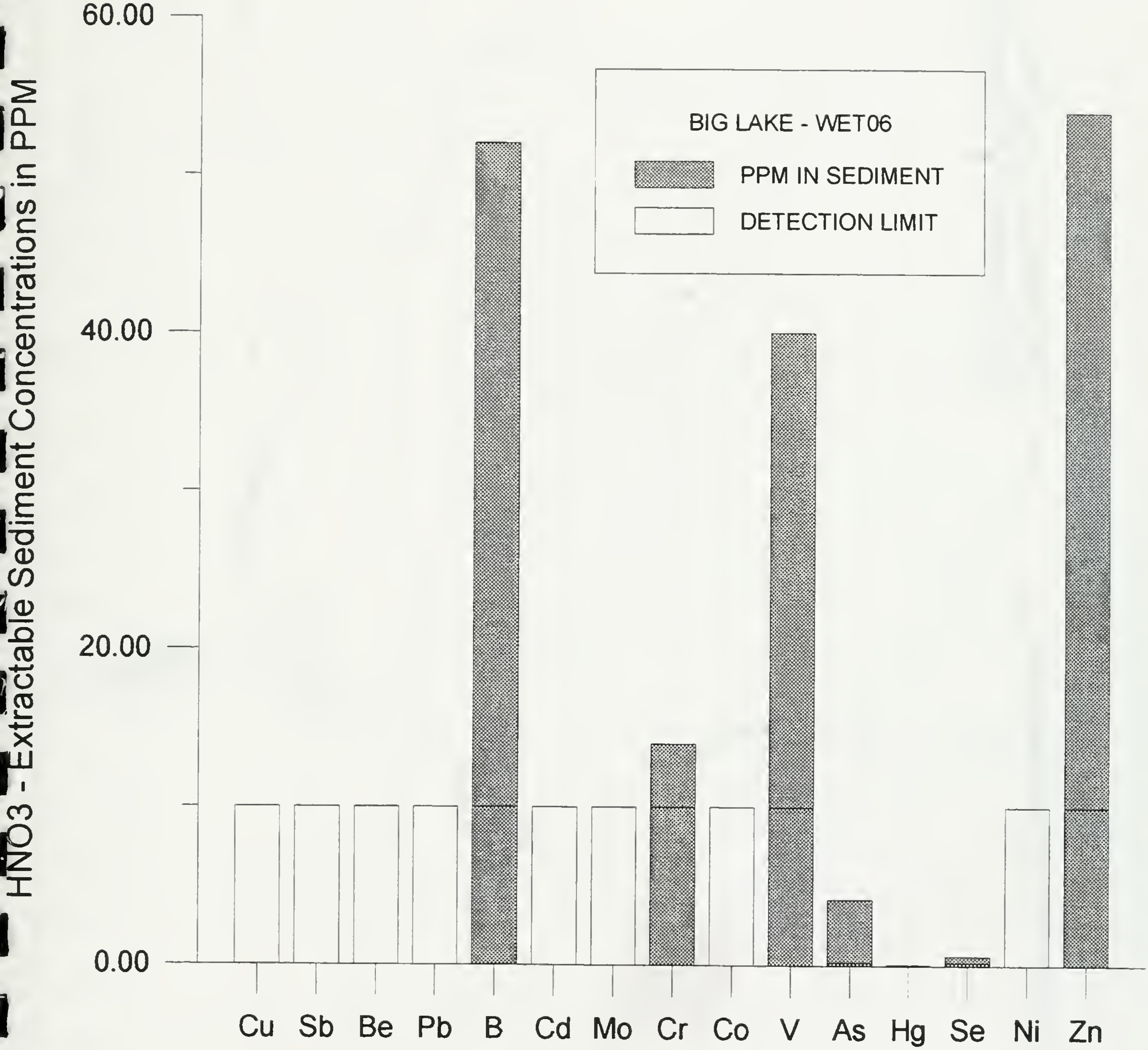
Primary bedrock geologic unit 211JDRV

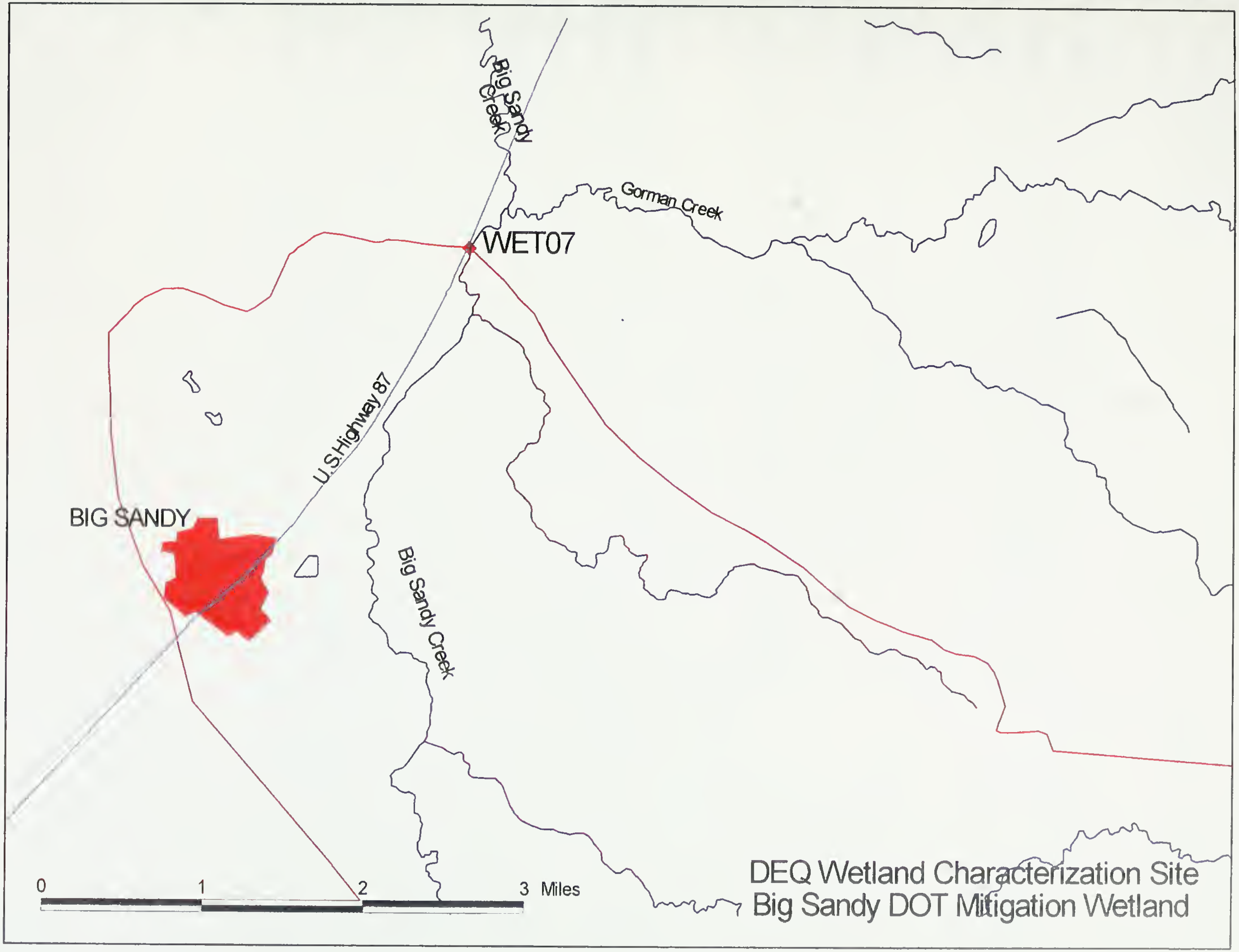

Total Annual Precipitation for Rapelje
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1910
1920
1930
1940
1950
1960
1970
1980
1990


Monthly Average, Maximum and Minimum Precipitation
Rapelje
Inches Precipitation
10.00
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec



BIG LAKE - WET06
Total recoverable concentration in water
Detection Limit
Concentrations in Milligrams per liter
1.600
1.200
0.800
0.400
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
60.00
40.00
20.00
0.00
BIG LAKE - WET06
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Big Sandy DOT Mitigation Wetland

Wetland: BIG SANDY DOT MITIGATION WETLAND   Site Code: WET07

7.5 Minute Quad: BIG SANDY   Lat: 48 12 35
Long: 110 4 50

Mean Annual Precipitation in Inches: 13.00

Mean Annual Potential Evaporation (Penman) in Inches: 39.00

'Net Precipitation' in Inches: -26.00

Site does not have a mapped surface inlet.

Site does not have a mapped surface outlet.

Site is not known to be artificially impounded.

Site does not have known significant water imports.

Mapped area of wetland: 10 acres

Area of contributing drainage basin: 61800 acres

Mapped elevation of wetland surface: 2673 ft

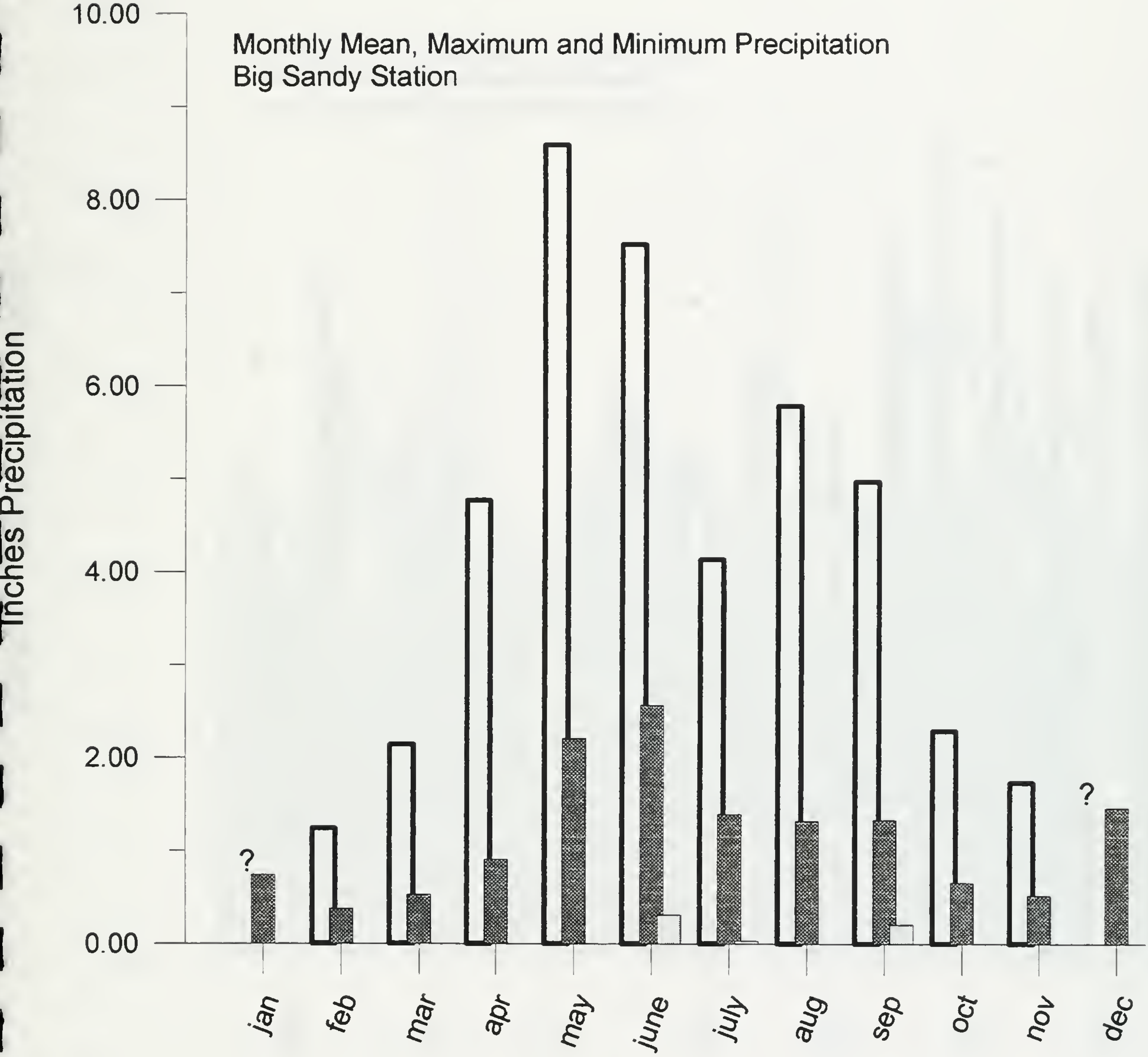
Maximum elevation within drainage basin: 6321 ft

Net relief of contributing basin: 3648 ft

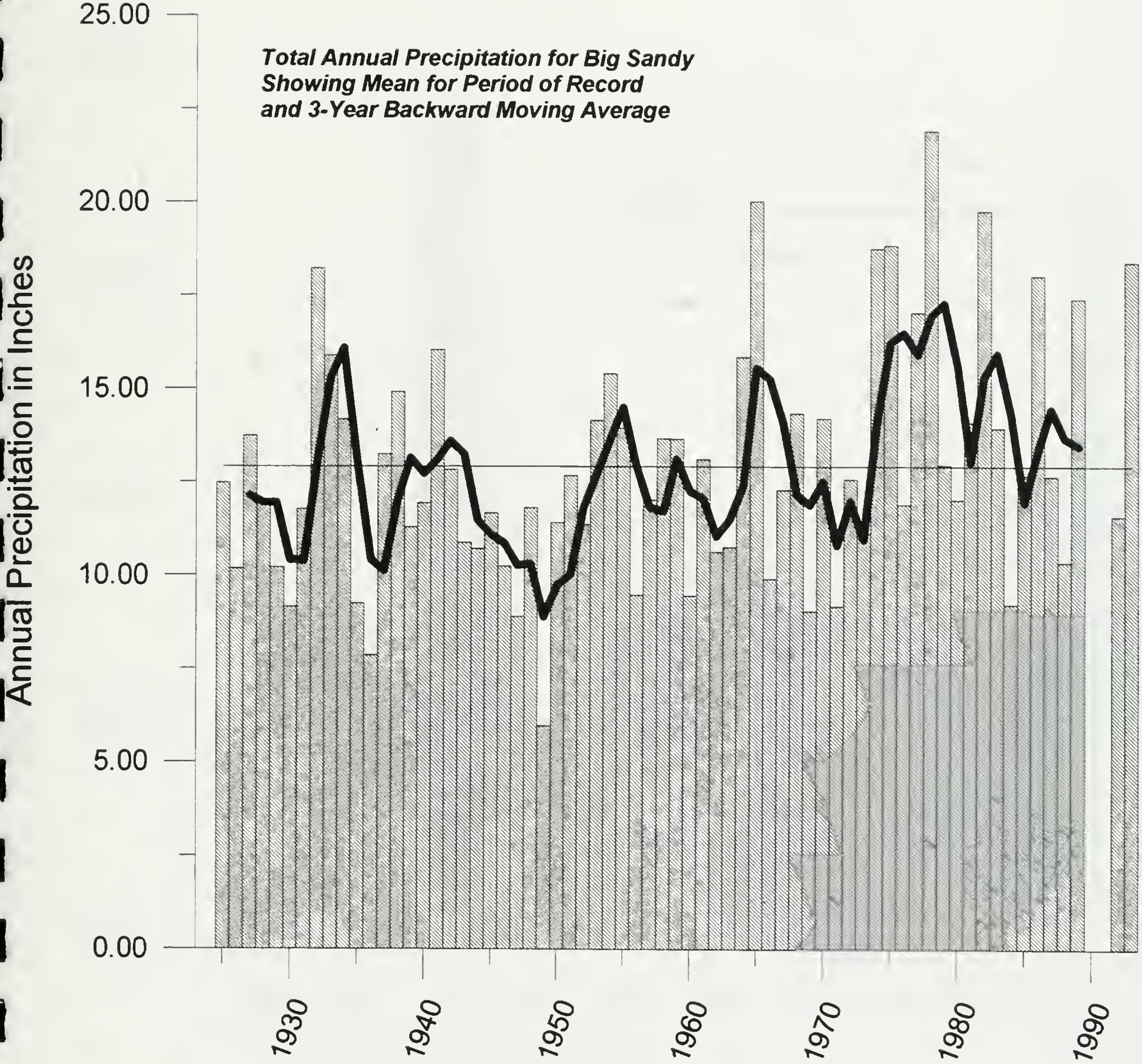
COE Hydrogeomorphic class: RIVERINE

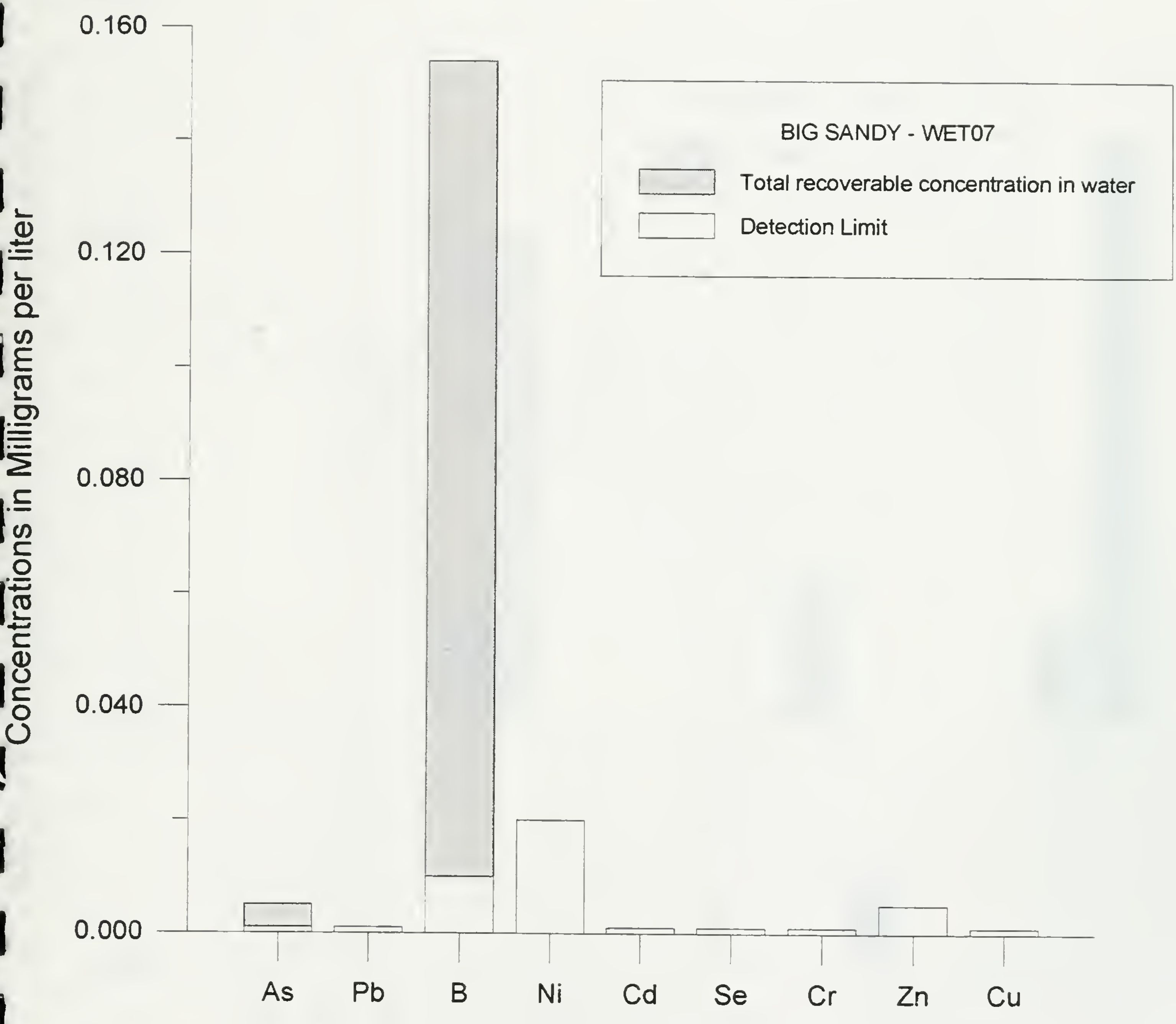
Primary surficial geologic unit 110ALVM

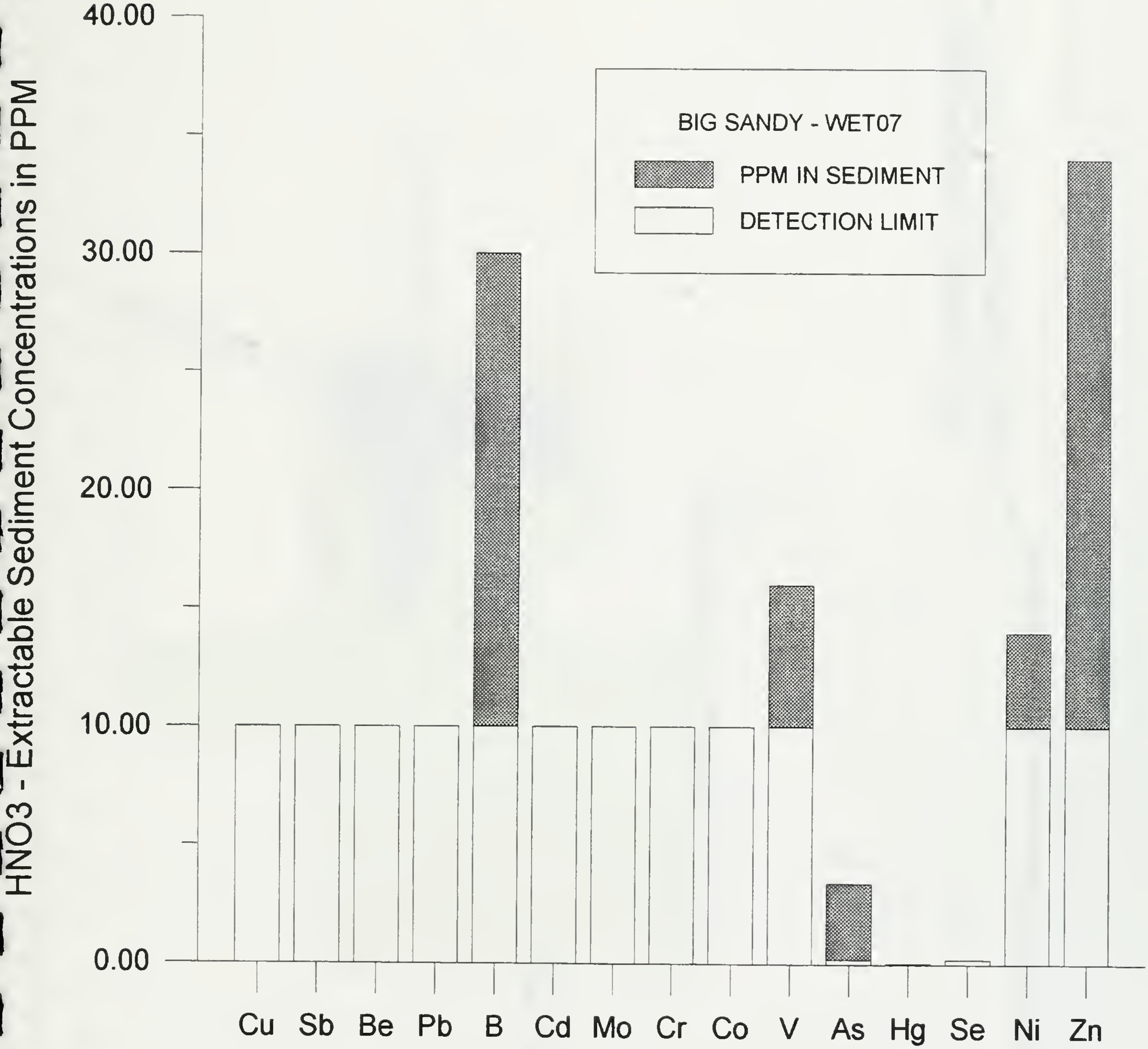
Primary bedrock geologic unit 211CLGG

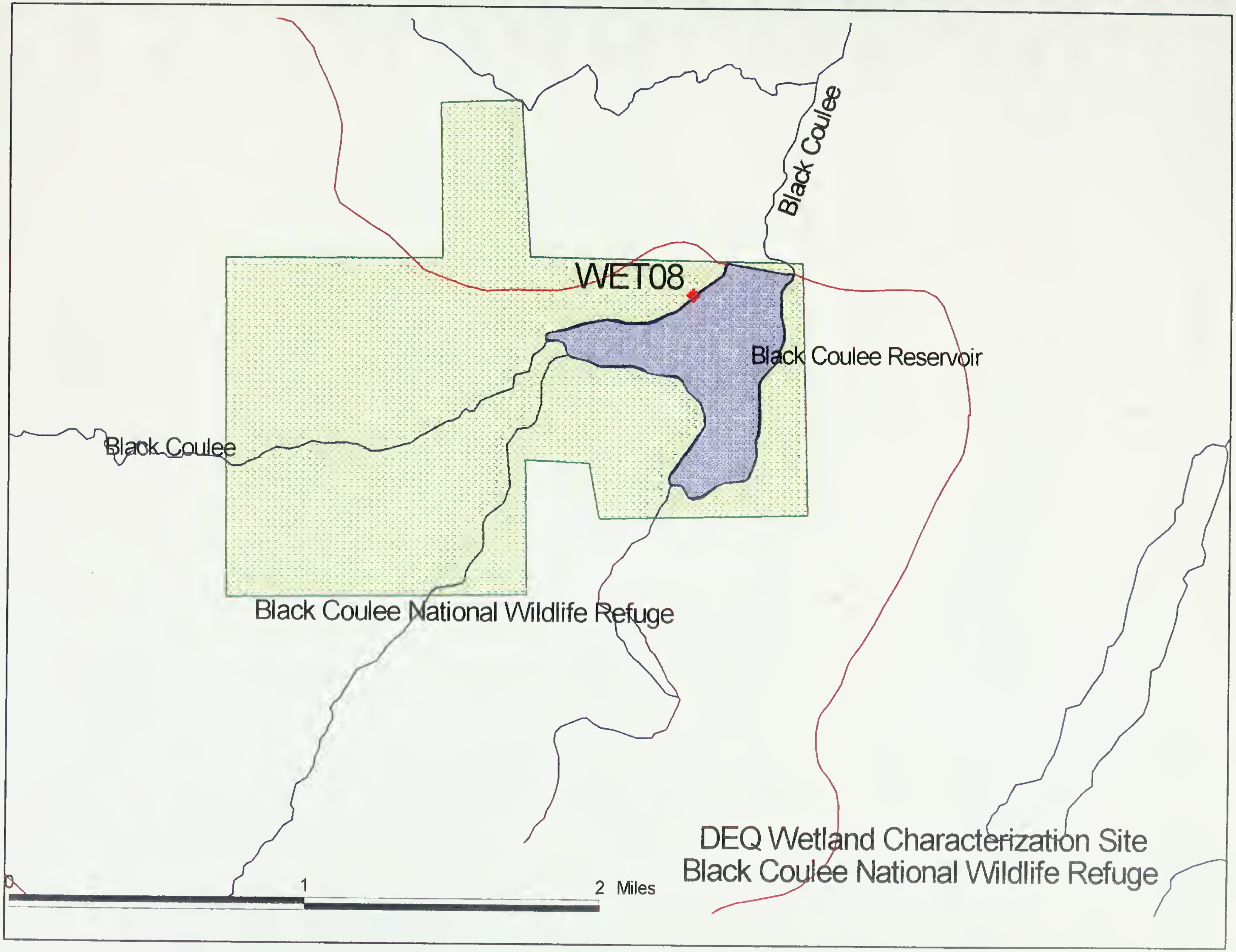


Monthly Mean, Maximum and Minimum Precipitation
Big Sandy Station
Inches Precipitation
10.00
8.00
6.00
4.00
2.00
0.00
?
?
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec


Total Annual Precipitation for Big Sandy
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1930
1940
1950
1960
1970
1980
1990


BIG SANDY - WET07
Total recoverable concentration in water
Detection Limit
Concentrations in Milligrams per liter
0.160
0.120
0.080
0.040
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
40.00
30.00
20.00
10.00
0.00
BIG SANDY - WET07
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn


DEQ Wetland Characterization Site
Black Coulee National Wildlife Refuge

Wetland: BLACK COULEE NWR	Site Code: WET08
7.5 Minute Quad: DOWN RESERVOIR NORTHWEST	Lat: 48 41 45 Long: 108 24 0

Mean Annual Precipitation in Inches:	11.00
Mean Annual Potential Evaporation (Penman) in Inches:	37.00
'Net Precipitation' in Inches:	-26.00

Site has a mapped surface inlet.

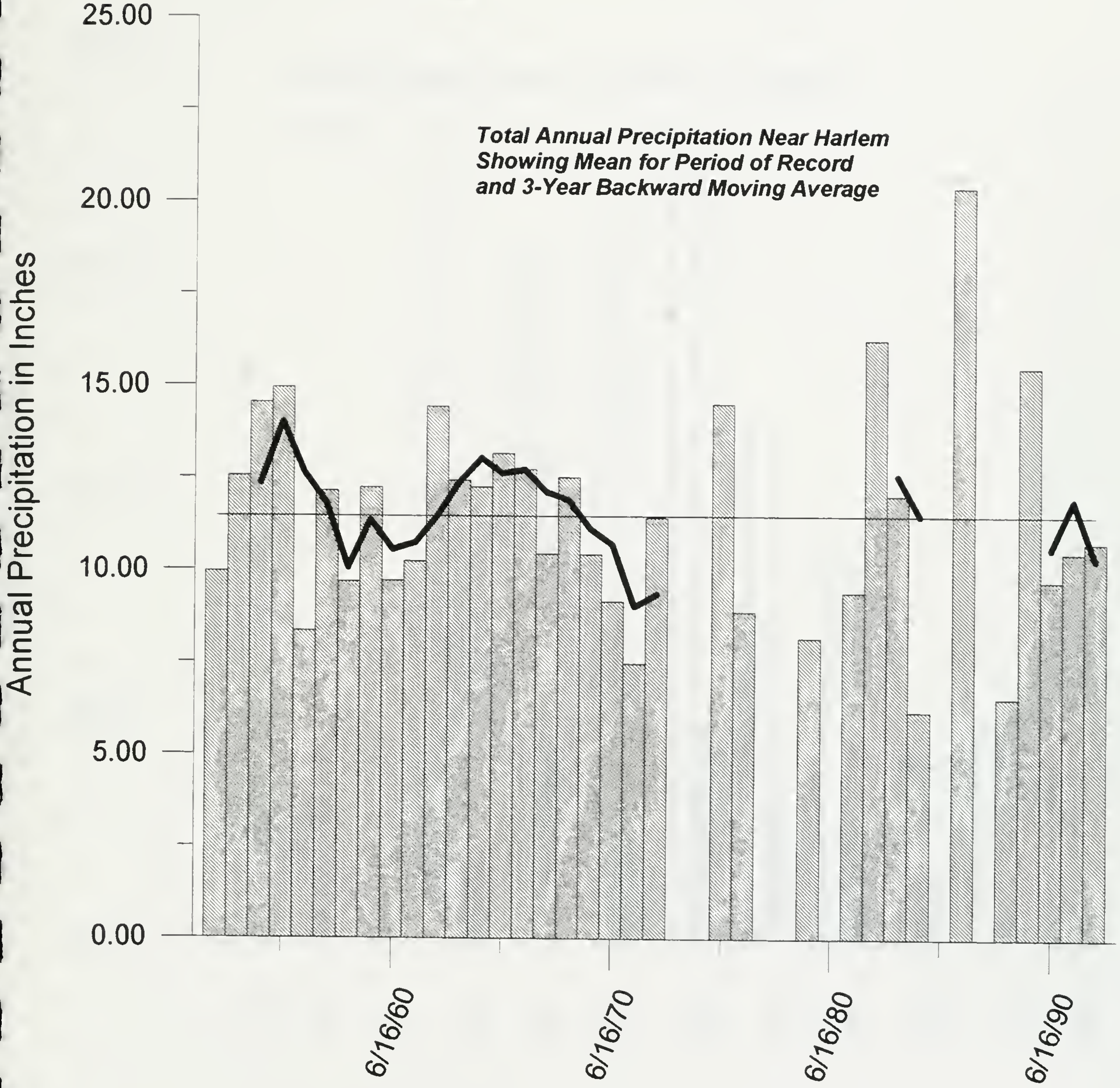
Site has a mapped surface outlet.

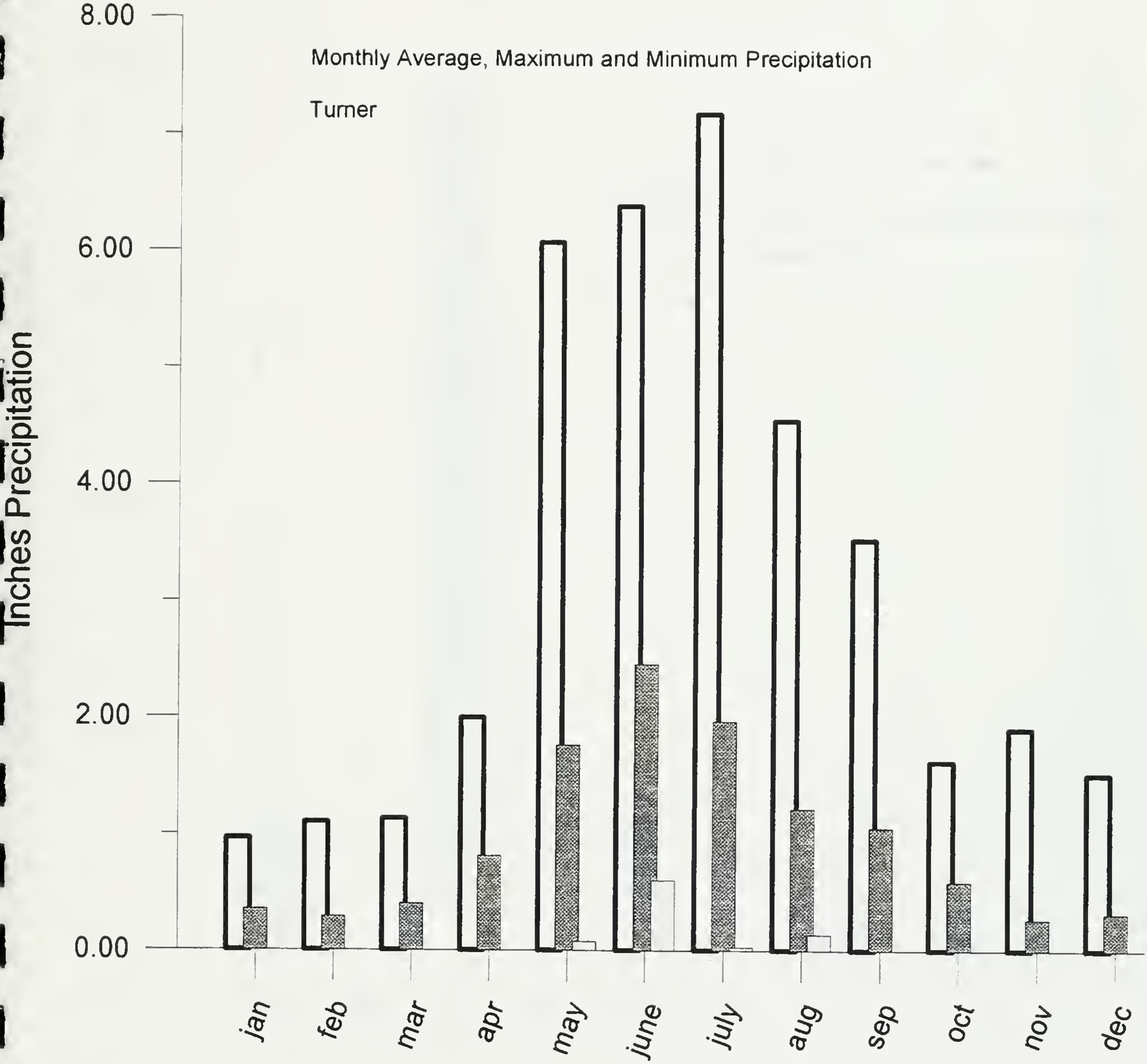
Site is artificially impounded.

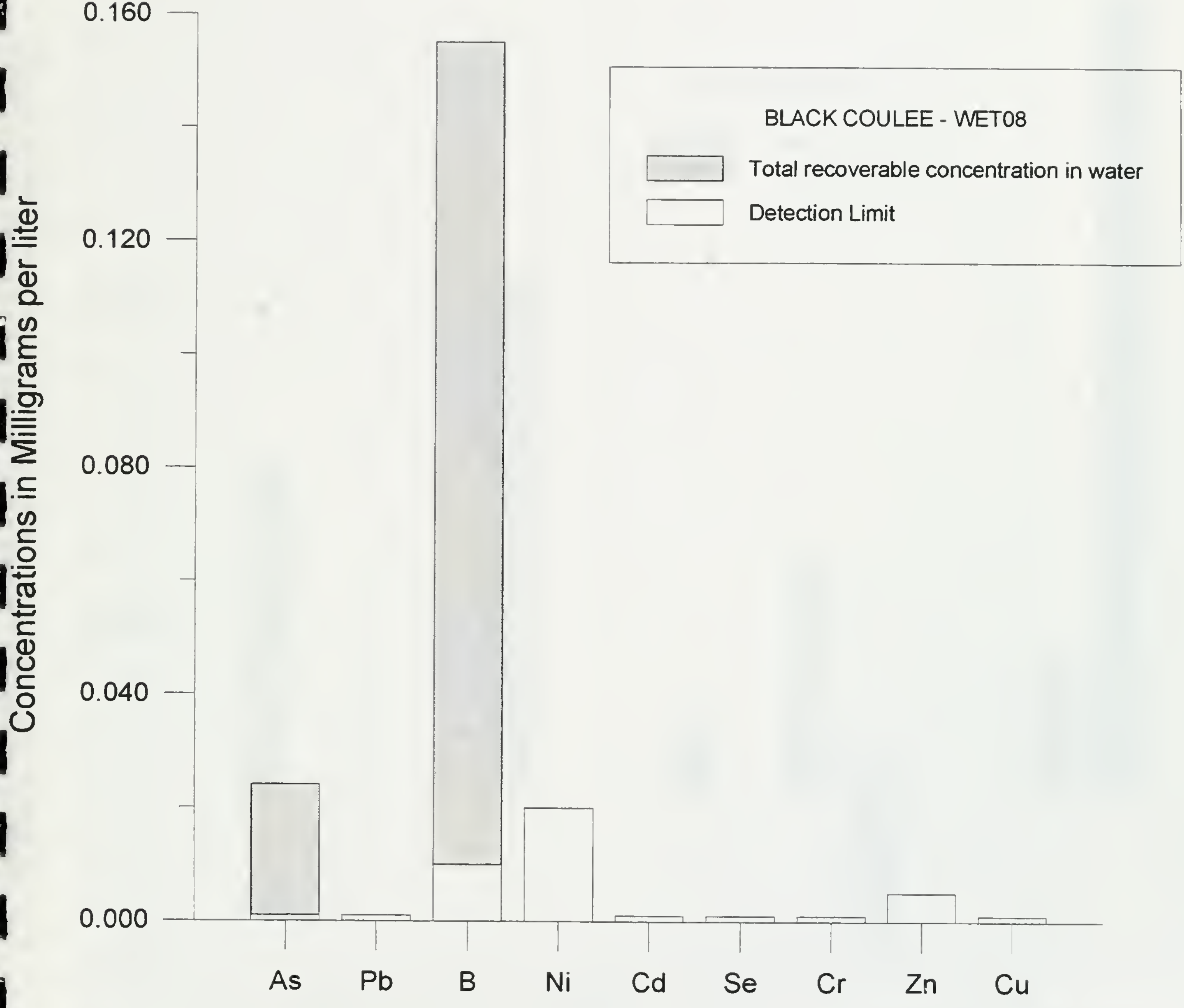
Site does not have known significant water imports.

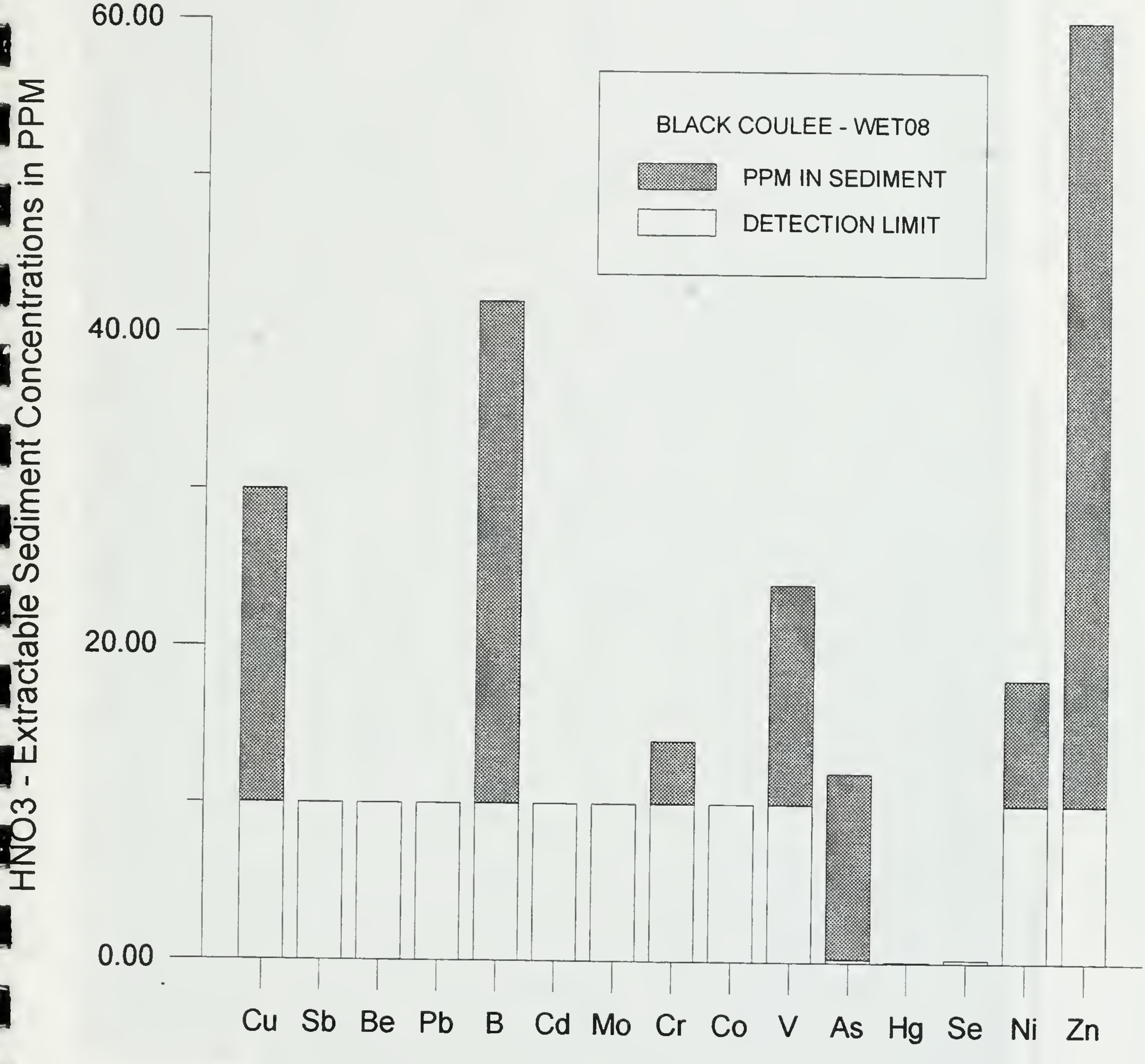
Mapped area of wetland:	170 acres
Area of contributing drainage basin:	8330 acres
Mapped elevation of wetland surface:	2903 ft
Maximum elevation within drainage basin:	3140 ft
Net relief of contributing basin:	237 ft

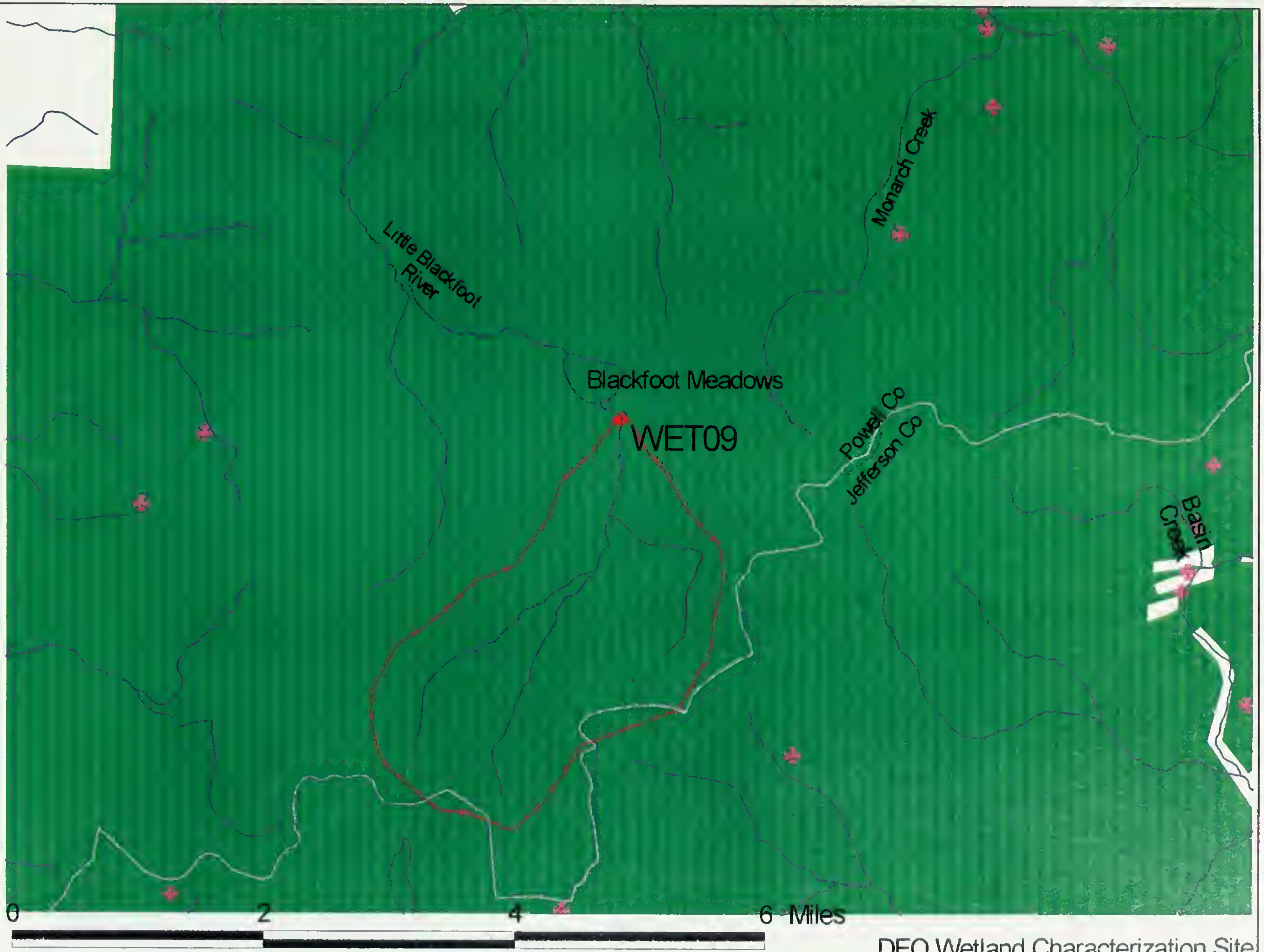
COE Hydrogeomorphic class:	FRINGE
Primary surficial geologic unit	112TILL
Primary bedrock geologic unit	211BRPW


Total Annual Precipitation Near Harlem
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
6/16/60
6/16/70
6/16/80
6/16/90


Monthly Average, Maximum and Minimum Precipitation
Turner
Inches Precipitation
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec


0.160
0.120
0.080
0.040
0.000
Concentrations in Milligrams per liter
BLACK COULEE - WET08
Total recoverable concentration in water
Detection Limit
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
60.00
40.00
20.00
0.00
BLACK COULEE - WET08
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Blackfoot Meadows

Wetland: BLACKFOOT MEADOWS

Site Code: WET09

7.5 Minute Quad: BISON MOUNTAIN

Lat: 46 23 0
Long: 112 26 50

Mean Annual Precipitation in Inches: 25.00

Mean Annual Potential Evaporation (Penman) in Inches: 27.00

'Net Precipitation' in Inches: -2.00

Site has a mapped surface inlet.

Site has a mapped surface outlet.

Site is not known to be artificially impounded.

Site does not have known significant water imports.

Mapped area of wetland: 50 acres

Area of contributing drainage basin: 3180 acres

Mapped elevation of wetland surface: 6610 ft

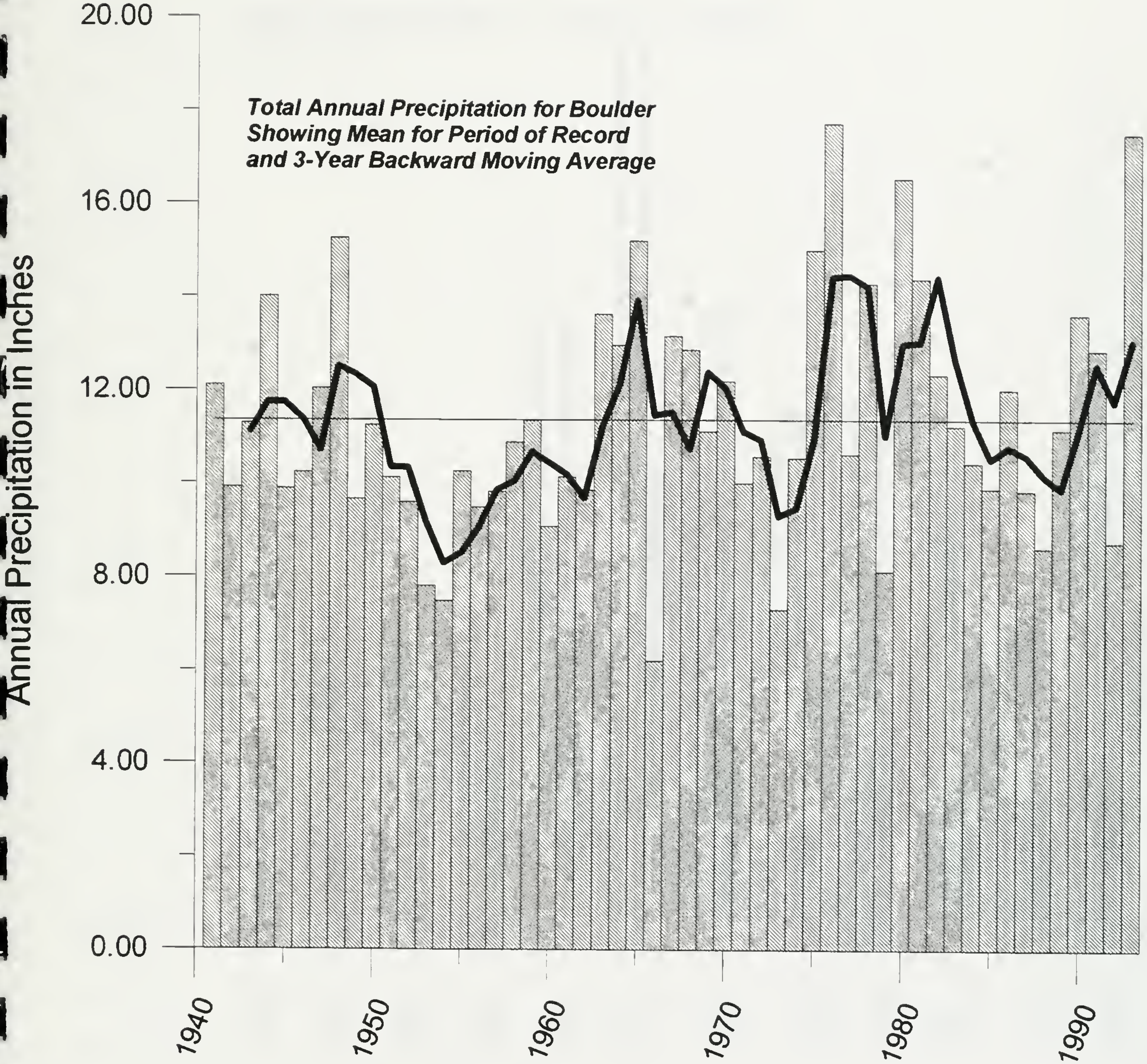
Maximum elevation within drainage basin: 8597 ft

Net relief of contributing basin: 1987 ft

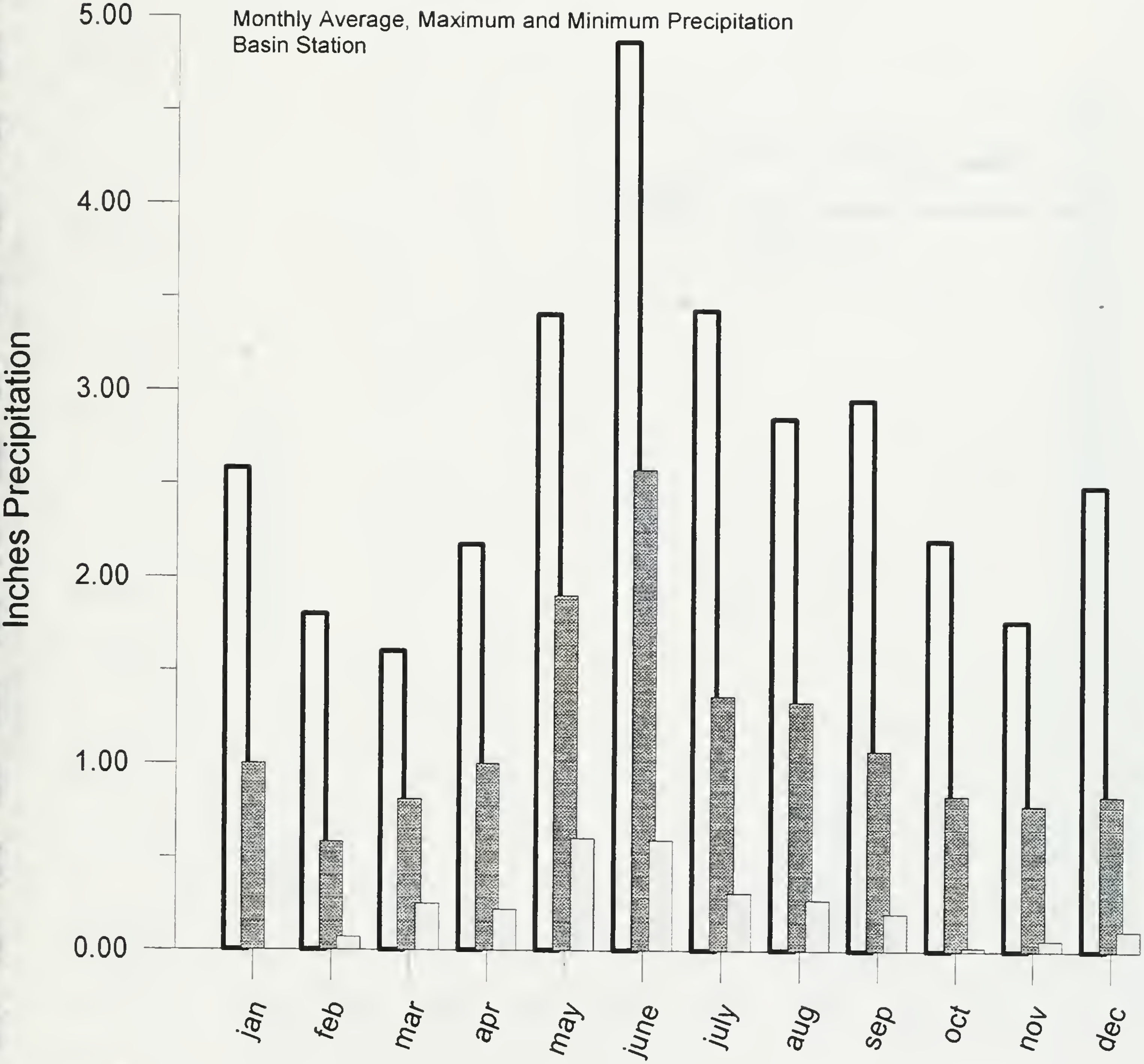
COE Hydrogeomorphic class: RIVERINE

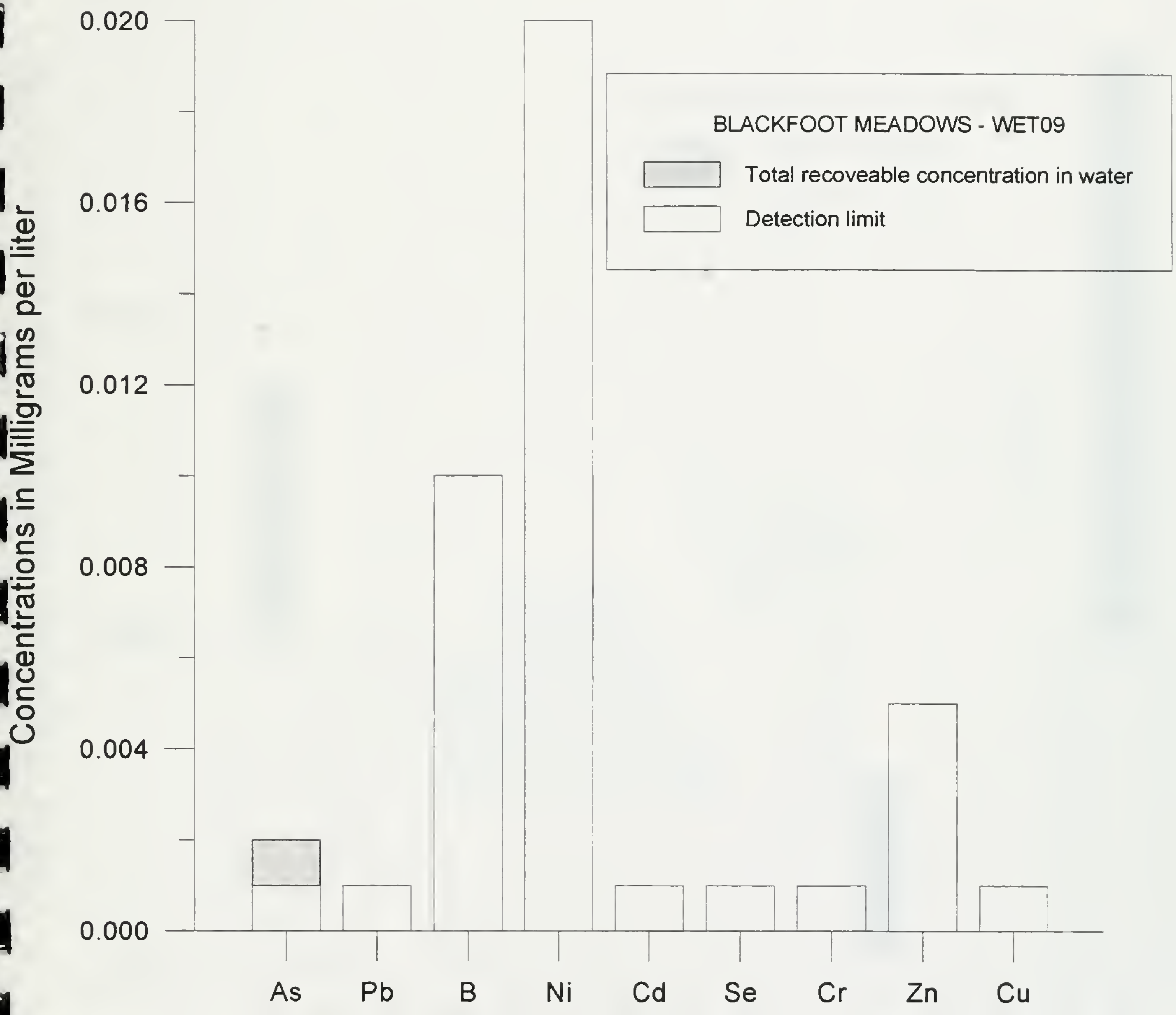
Primary surficial geologic unit 110ALVM

Primary bedrock geologic unit 120VLCC

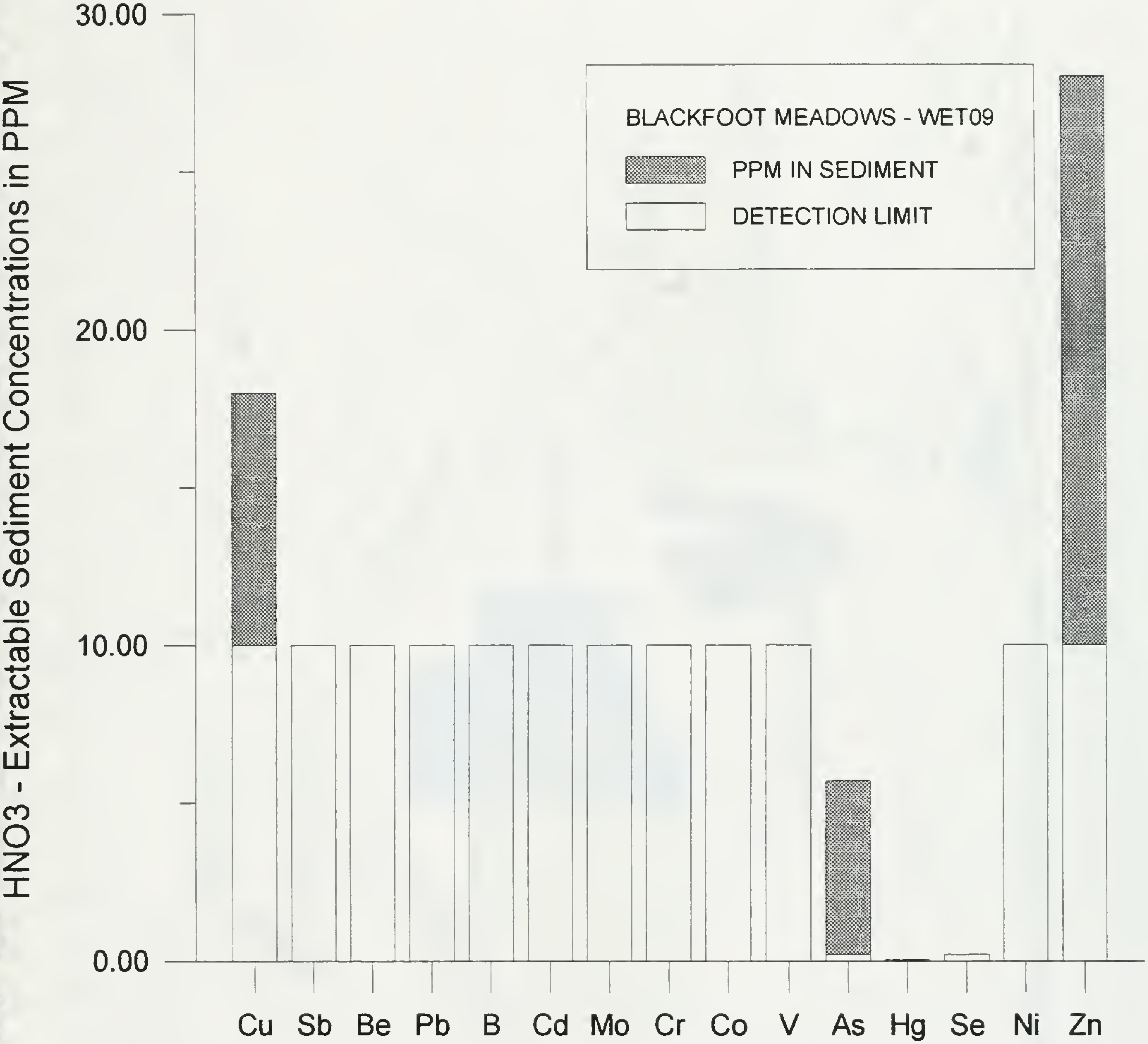


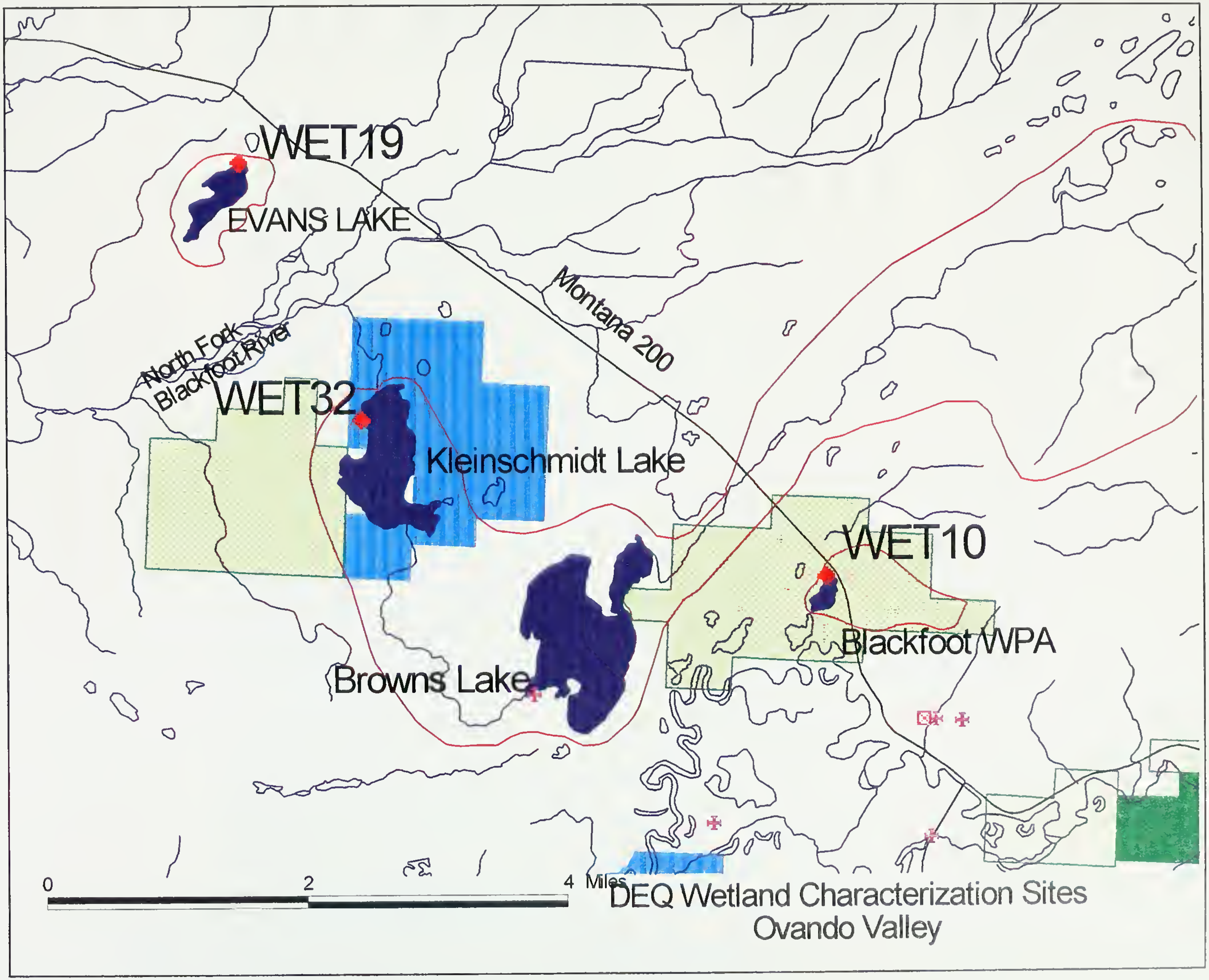
Total Annual Precipitation for Boulder Showing Mean for Period of Record and 3-Year Backward Moving Average


Monthly Average, Maximum and Minimum Precipitation
Basin Station
Inches Precipitation
5.00
4.00
3.00
2.00
1.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec



BLACKFOOT MEADOWS - WET09
Total recoveable concentration in water
Detection limit
Concentrations in Milligrams per liter
0.020
0.016
0.012
0.008
0.004
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
30.00
20.00
10.00
0.00
BLACKFOOT MEADOWS - WET09
▨ PPM IN SEDIMENT
☐ DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Sites
Ovando Valley

Wetland: BLACKFOOT WPA	Site Code: WET10
7.5 Minute Quad: MARCUM MOUNTAIN	Lat: 46 57 50 Long: 112 58 15

Mean Annual Precipitation in Inches:	19.00
Mean Annual Potential Evaporation (Penman) in Inches:	31.00
'Net Precipitation' in Inches:	-12.00

Site has a mapped surface inlet.

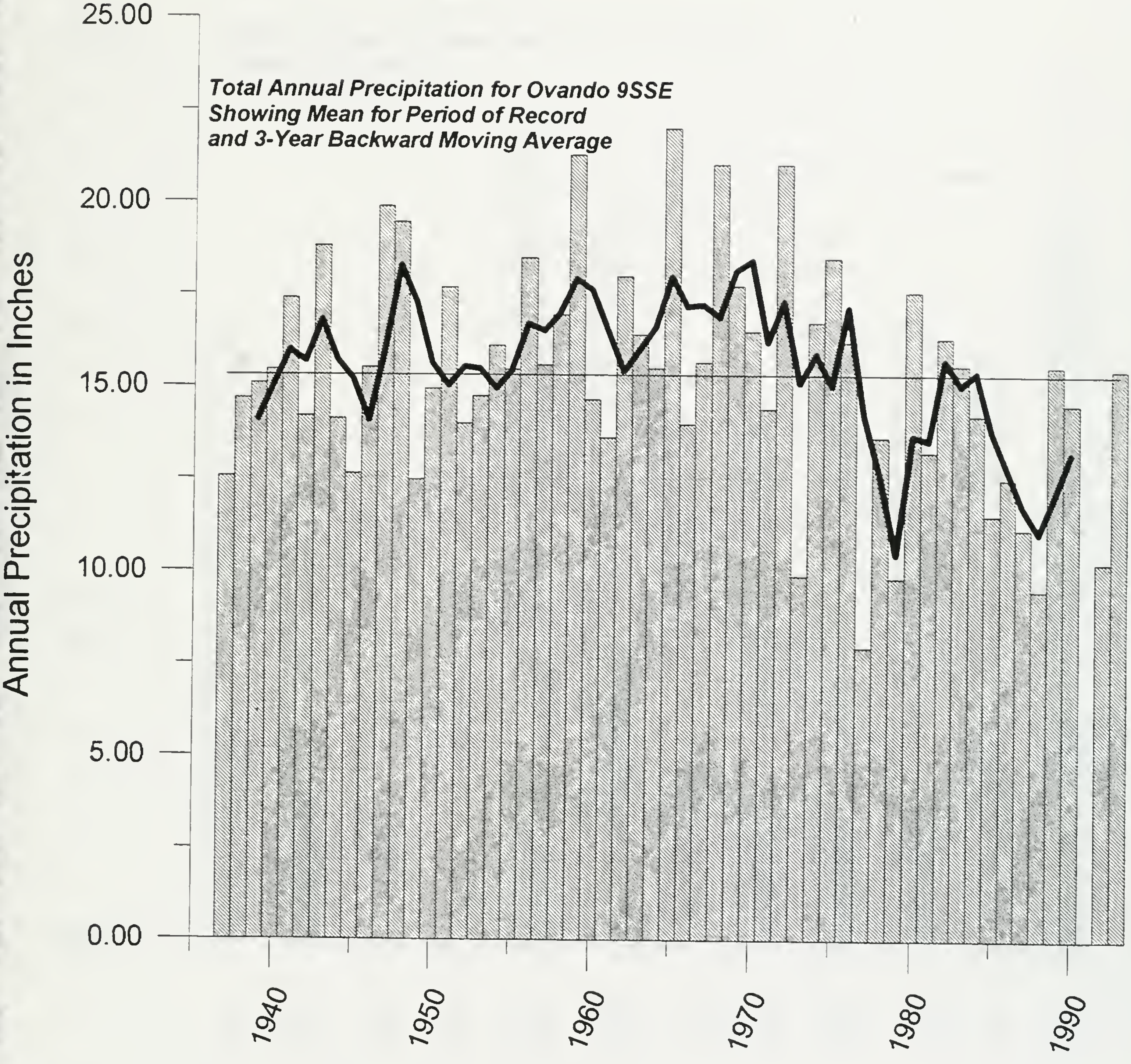
Site has a mapped surface outlet.

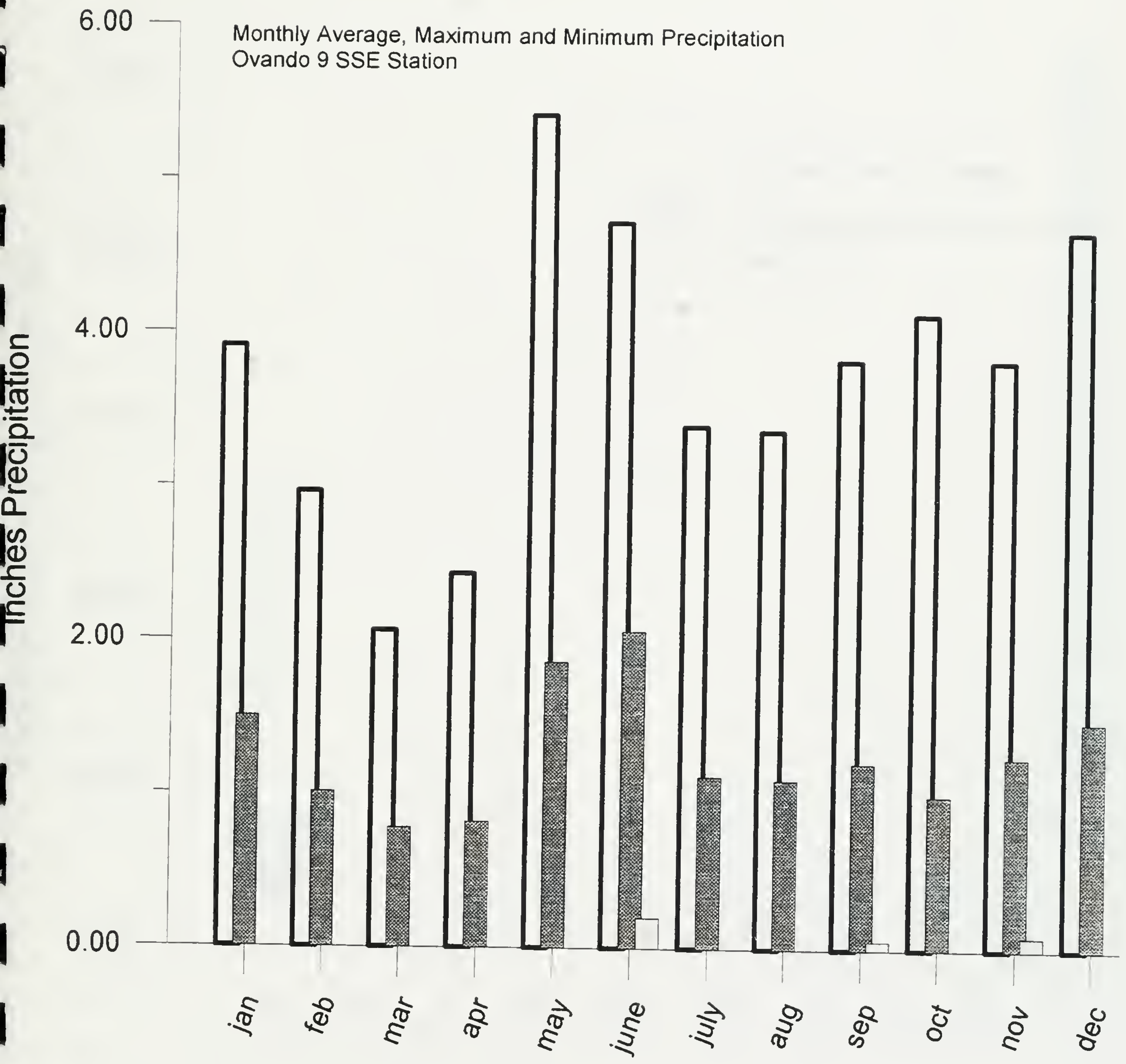
Site is artificially impounded.

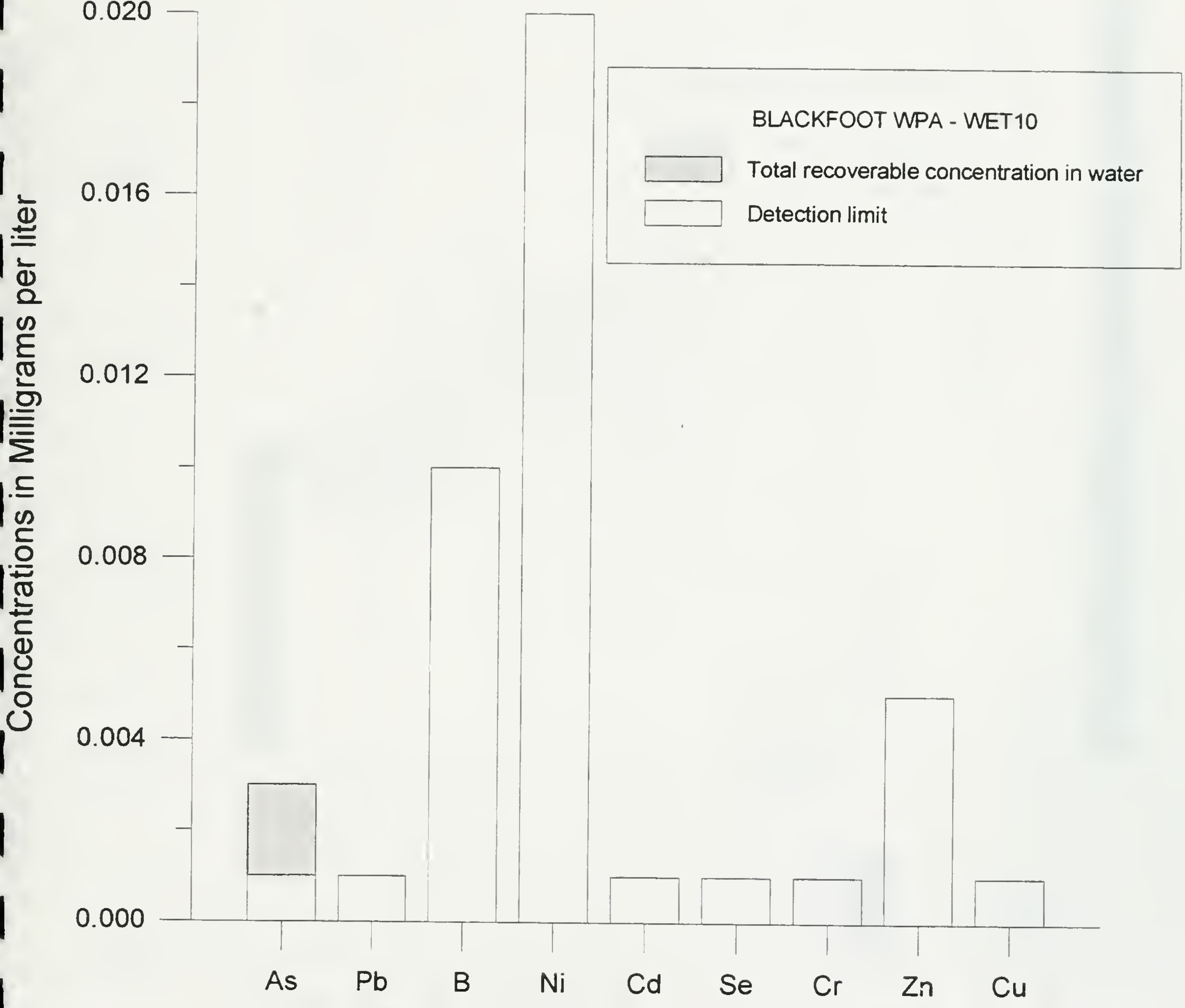
Site does not have known significant water imports.

Mapped area of wetland:	20 acres
Area of contributing drainage basin:	320 acres
Mapped elevation of wetland surface:	4300 ft
Maximum elevation within drainage basin:	5880 ft
Net relief of contributing basin:	1580 ft

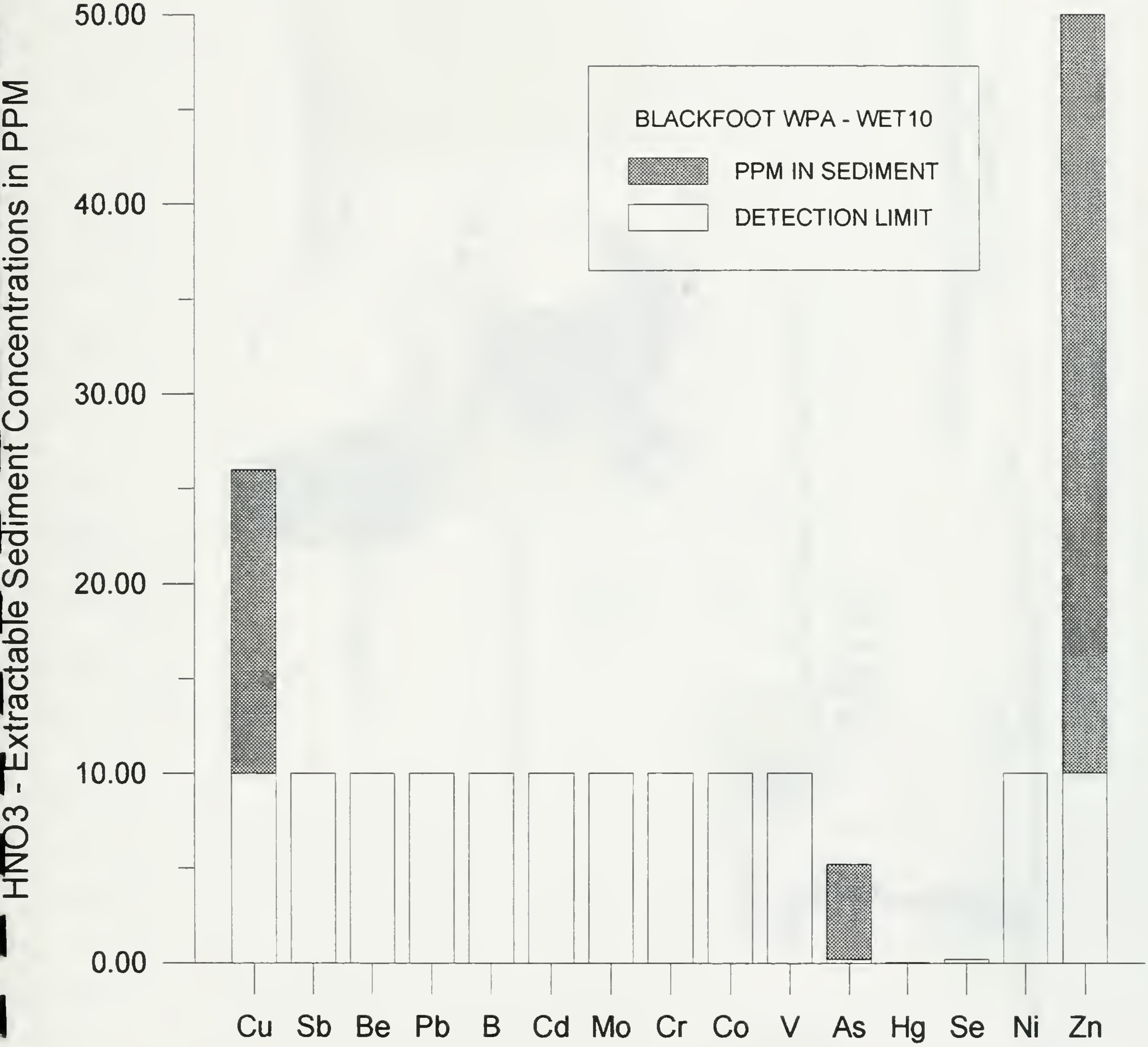
COE Hydrogeomorphic class:	DEPRESSIONAL
Primary surficial geologic unit	112DRFT
Primary bedrock geologic unit	400BELT

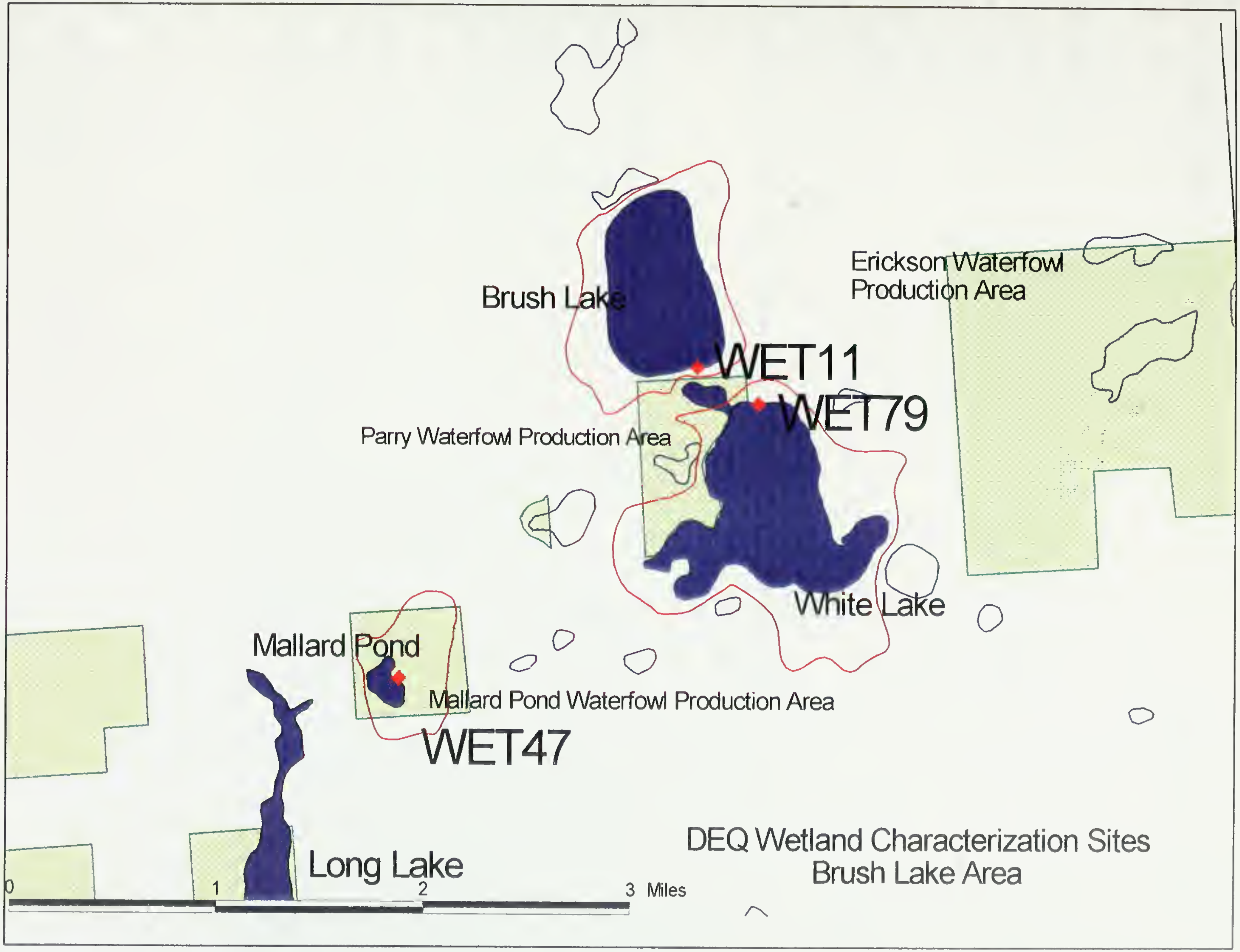

Total Annual Precipitation for Ovando 9SSE
Showing Mean for Period of Record
and 3-Year Backward Moving Average


Monthly Average, Maximum and Minimum Precipitation
Ovando 9 SSE Station
6.00
4.00
2.00
0.00
Inches Precipitation
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec



Concentrations in Milligrams per liter
0.020
0.016
0.012
0.008
0.004
0.000
BLACKFOOT WPA - WET10
Total recoverable concentration in water
Detection limit
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
50.00
40.00
30.00
20.00
10.00
0.00
BLACKFOOT WPA - WET10
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Sites
Brush Lake Area

Brush Lake
Erickson Waterfowl Production Area
WET11
WET79
Parry Waterfowl Production Area
White Lake
Mallard Pond
Mallard Pond Waterfowl Production Area
WET47
Long Lake
0
1
2
3 Miles

Wetland: BRUSH LAKE

Site Code: WET11

7.5 Minute Quad: BRUSH LAKE

Lat: 48 35 35
Long: 104 6 20

Mean Annual Precipitation in Inches: 13.00

Mean Annual Potential Evaporation (Penman) in Inches: 36.00

'Net Precipitation' in Inches: -23.00

Site does not have a mapped surface inlet.

Site does not have a mapped surface outlet.

Site is not known to be artificially impounded.

Site does not have known significant water imports.

Mapped area of wetland: 250 acres

Area of contributing drainage basin: 460 acres

Mapped elevation of wetland surface: 1956 ft

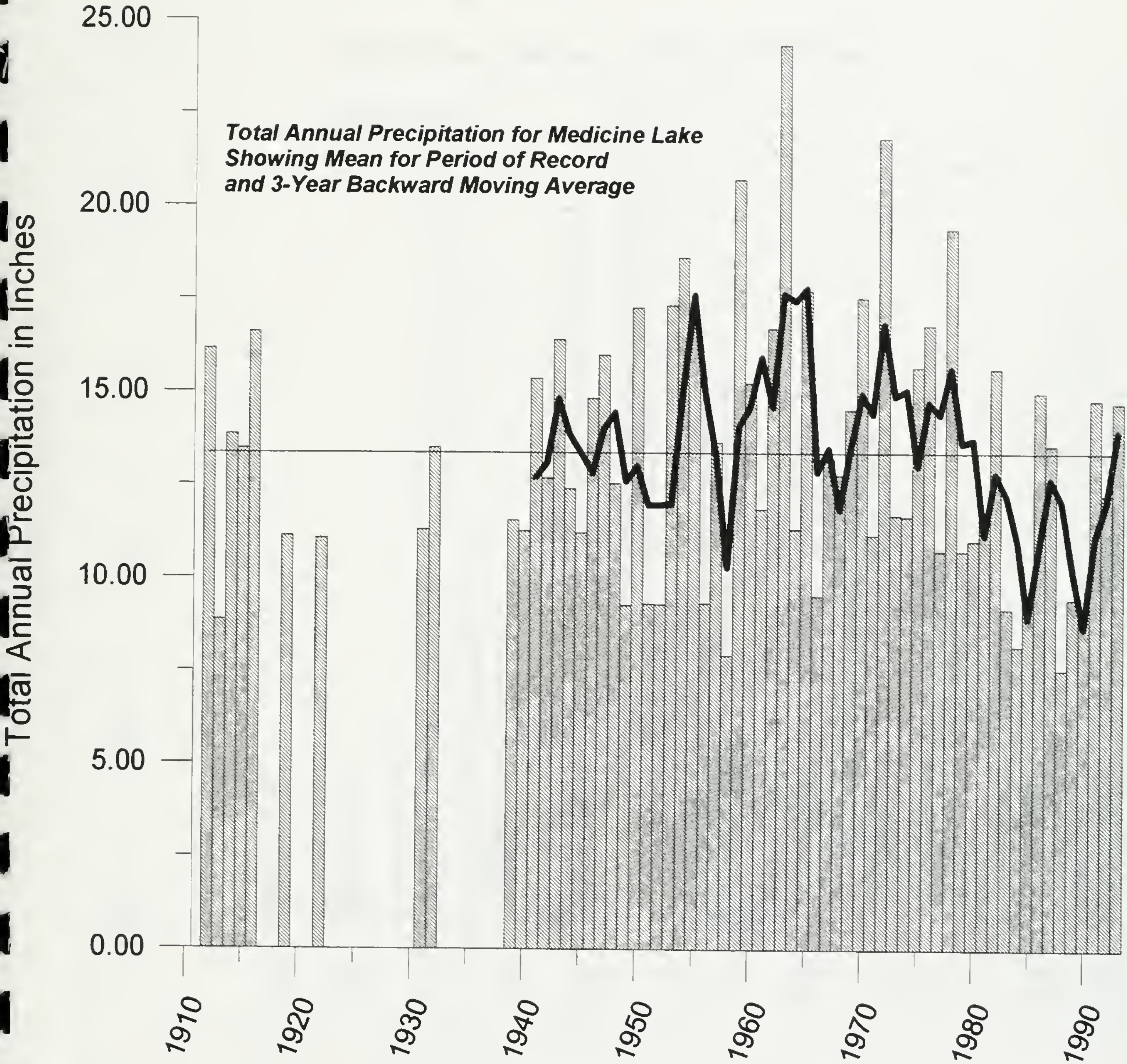
Maximum elevation within drainage basin: 2022 ft

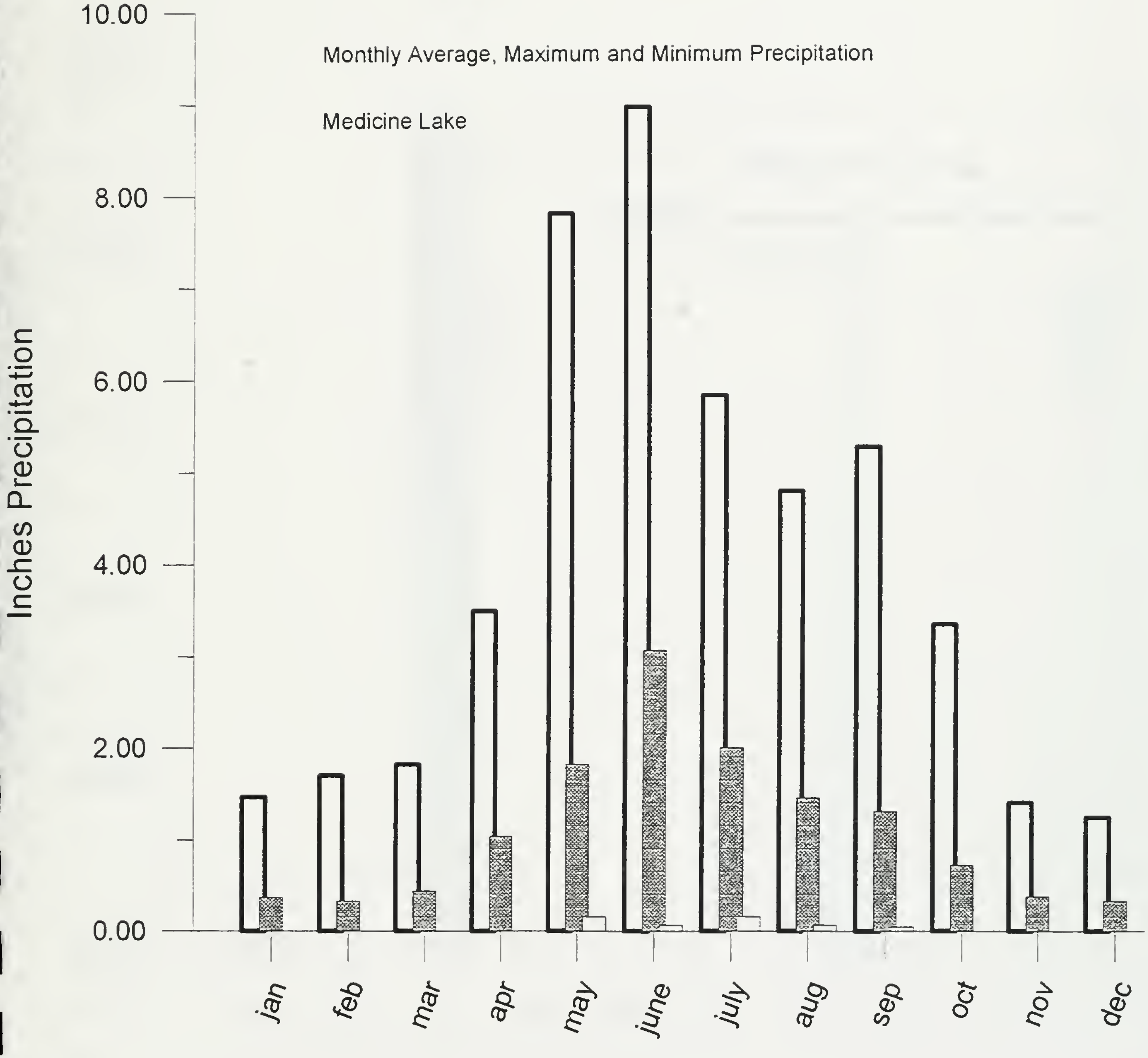
Net relief of contributing basin: 66 ft

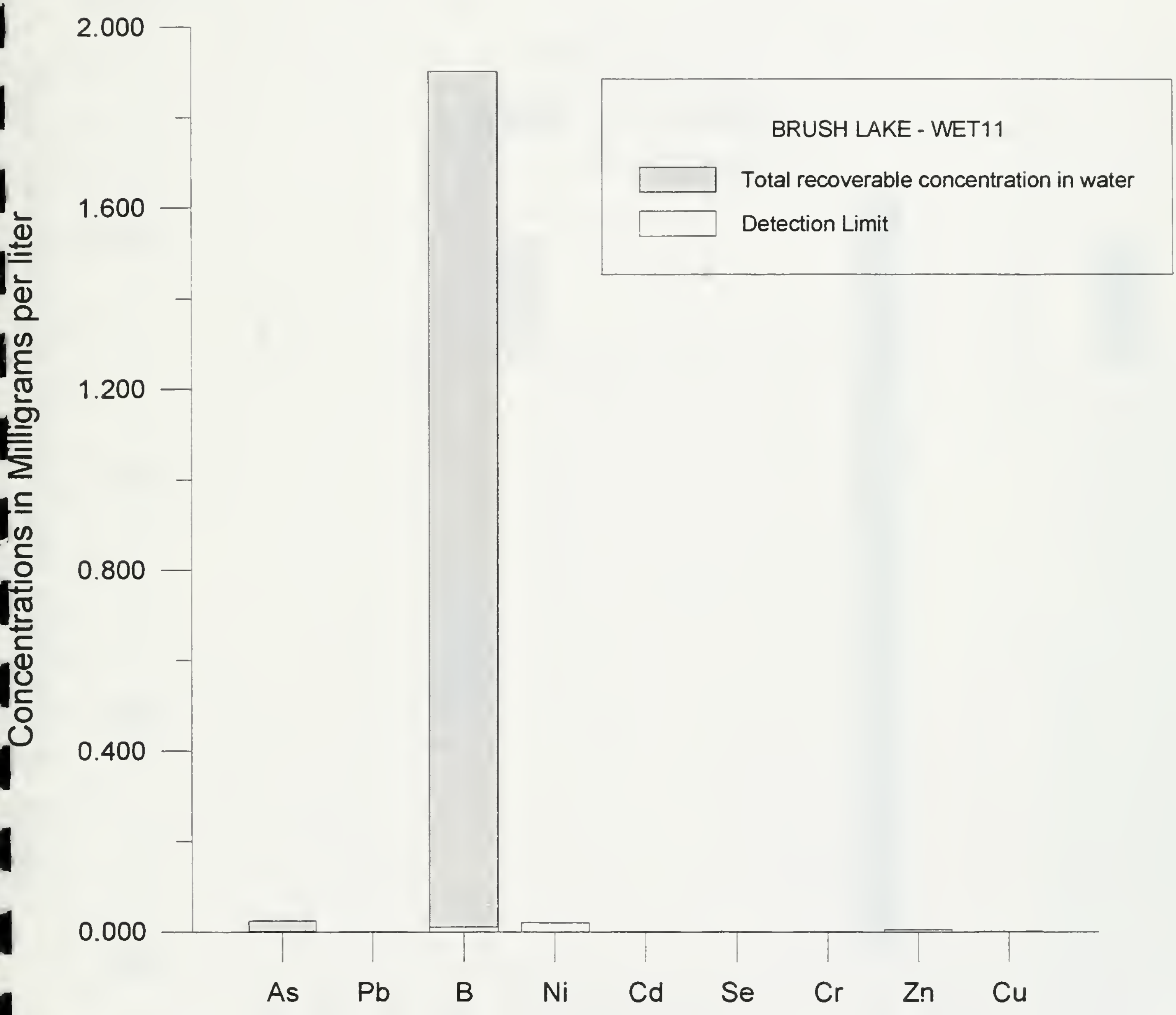
COE Hydrogeomorphic class: FRINGE

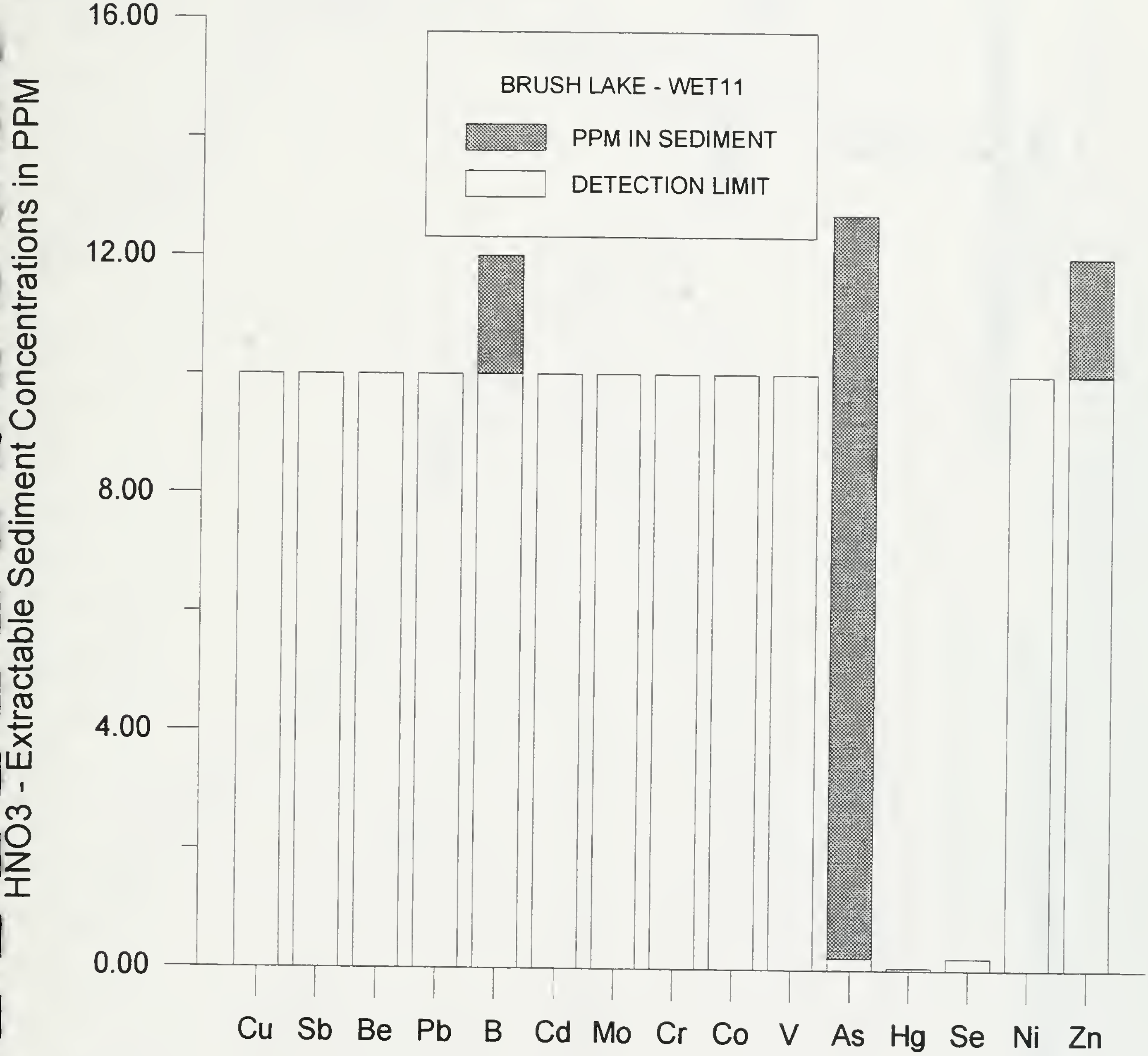
Primary surficial geologic unit 112OTSH

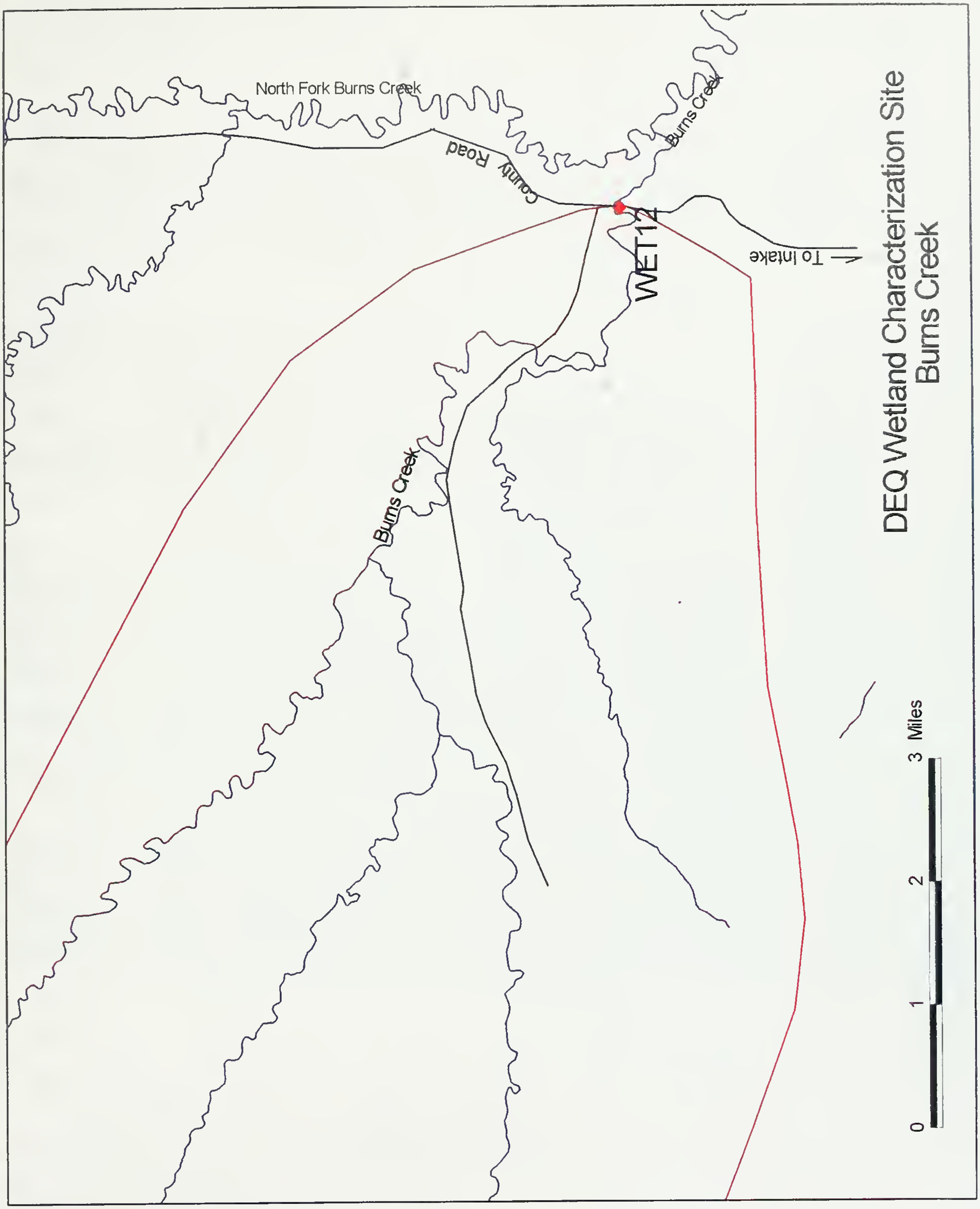
Primary bedrock geologic unit 125FRUN


Total Annual Precipitation for Medicine Lake
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Total Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1910
1920
1930
1940
1950
1960
1970
1980
1990


10.00
8.00
6.00
4.00
2.00
0.00
Inches Precipitation
Monthly Average, Maximum and Minimum Precipitation
Medicine Lake
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec


Concentrations in Milligrams per liter
2.000
1.600
1.200
0.800
0.400
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu
BRUSH LAKE - WET11
Total recoverable concentration in water
Detection Limit

HNO3 - Extractable Sediment Concentrations in PPM
16.00
12.00
8.00
4.00
0.00
BRUSH LAKE - WET11
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Burns Creek

Wetland: BURNS CREEK WETLAND	Site Code: WET12
7.5 Minute Quad: ALLARD RANCH	Lat: 47 24 45 Long: 104 33 35

Mean Annual Precipitation in Inches:	13.00
Mean Annual Potential Evaporation (Penman) in Inches:	39.00
'Net Precipitation' in Inches:	-26.00

Site has a mapped surface inlet.

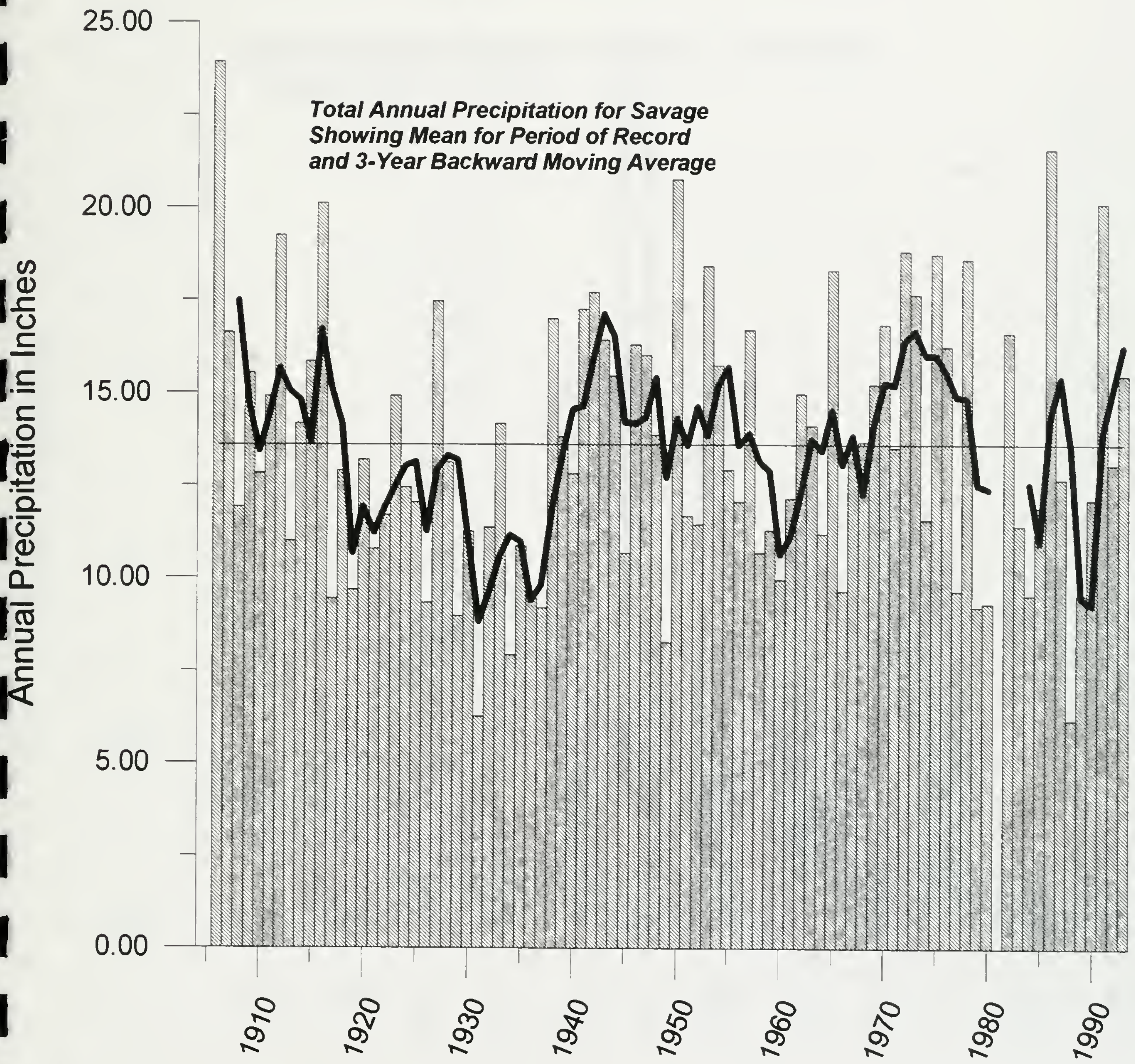
Site has a mapped surface outlet.

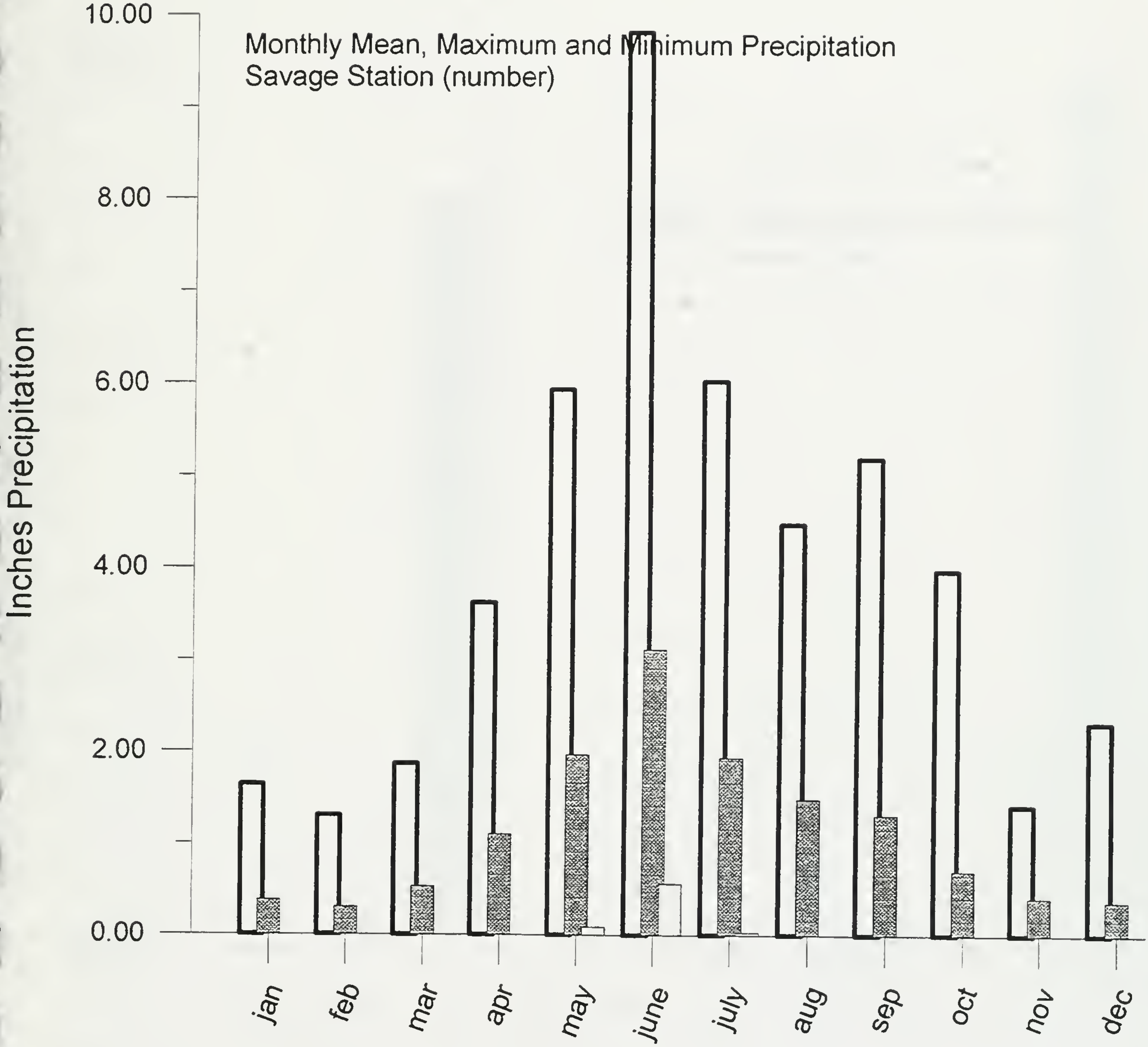
Site is not known to be artificially impounded.

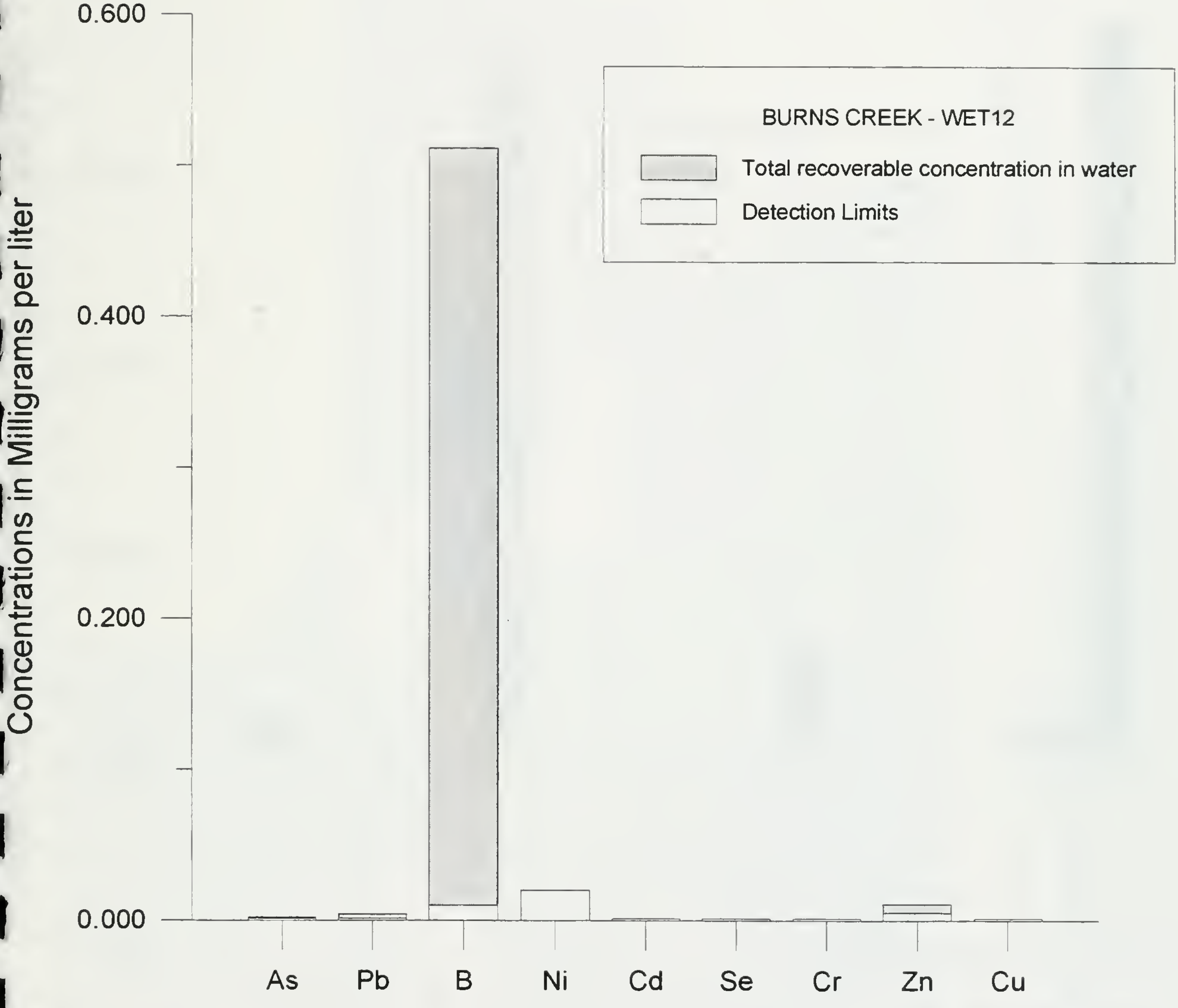
Site does not have known significant water imports.

Mapped area of wetland:	20 acres
Area of contributing drainage basin:	2400 acres
Mapped elevation of wetland surface:	2170 ft
Maximum elevation within drainage basin:	2732 ft
Net relief of contributing basin:	562 ft

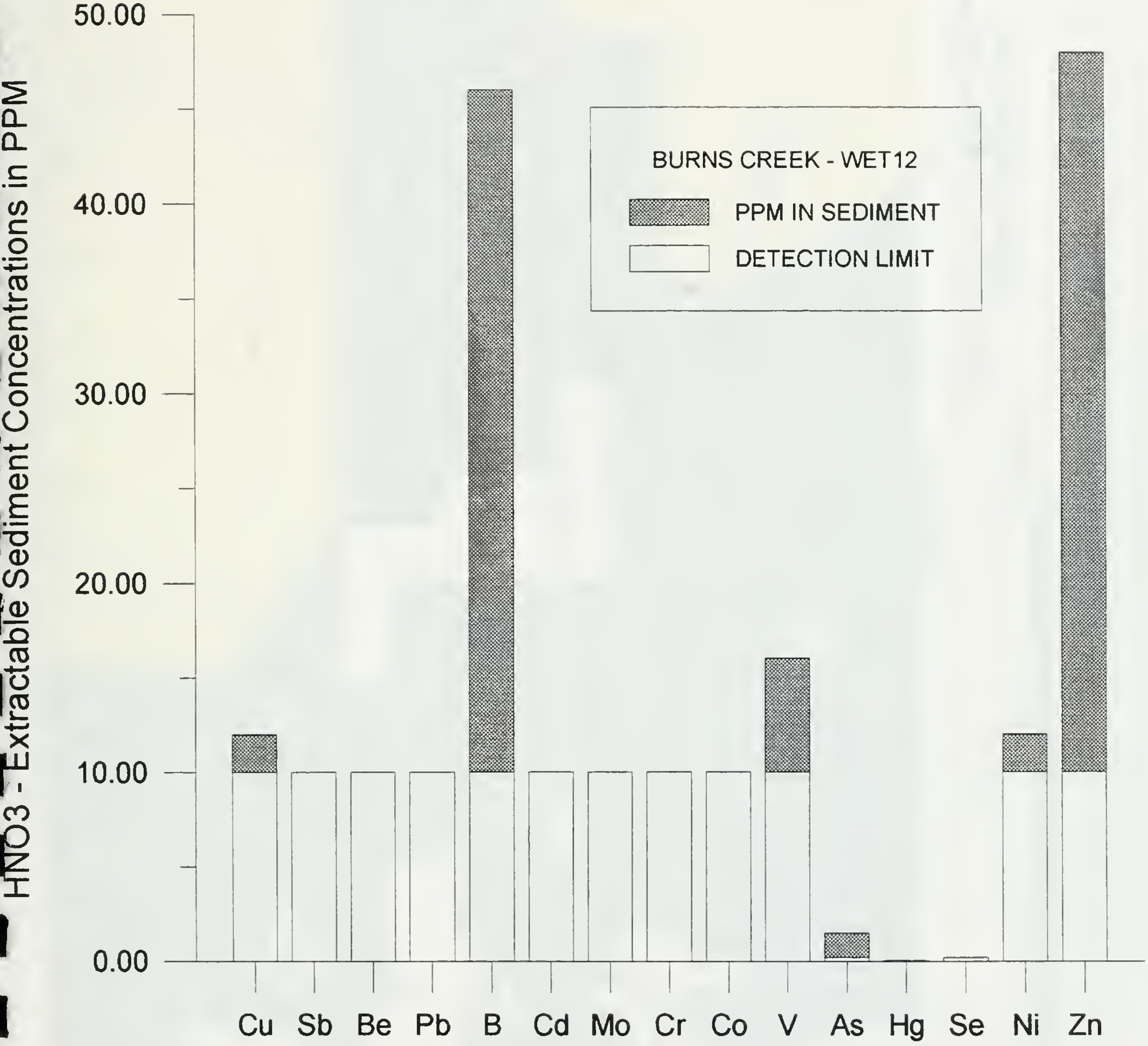
COE Hydrogeomorphic class:	RIVERINE
Primary surficial geologic unit	110ALVM
Primary bedrock geologic unit	125FRUN

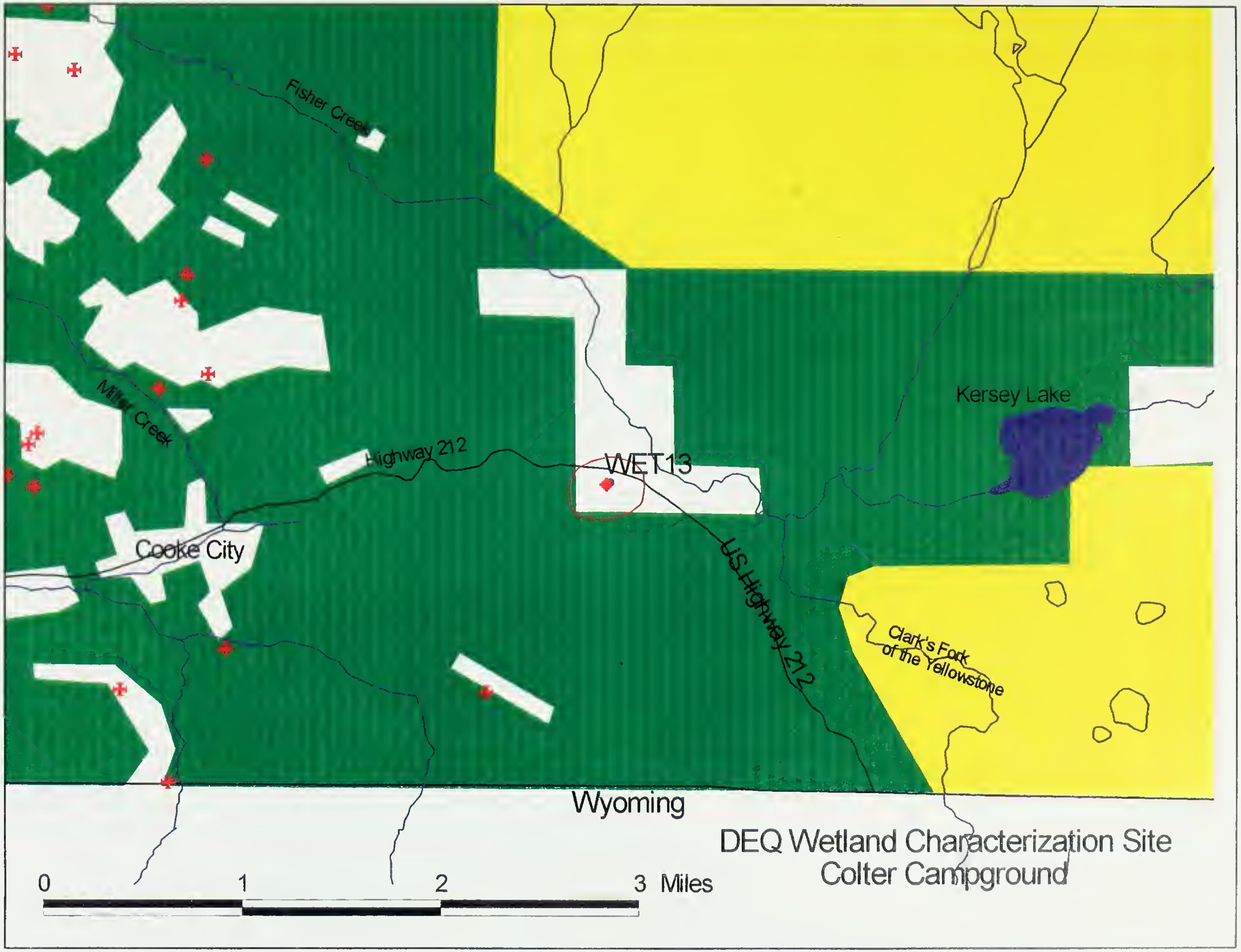

Total Annual Precipitation for Savage
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1910
1920
1930
1940
1950
1960
1970
1980
1990


Monthly Mean, Maximum and Minimum Precipitation
Savage Station (number)
Inches Precipitation
10.00
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec



BURNS CREEK - WET12
Total recoverable concentration in water
Detection Limits
Concentrations in Milligrams per liter
0.600
0.400
0.200
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
50.00
40.00
30.00
20.00
10.00
0.00
BURNS CREEK - WET12
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Colter Campground

Wetland: COLTER CAMPGROUND WETLAND Site Code: WET13

7.5 Minute Quad: COOKE CITY

Lat: 45 1 30
Long: 109 53 10

Mean Annual Precipitation in Inches: 70.00

Mean Annual Potential Evaporation (Penman) in Inches: 26.00

'Net Precipitation' in Inches: 44.00

Site does not have a mapped surface inlet.

Site does not have a mapped surface outlet.

Site is not known to be artificially impounded.

Site does not have known significant water imports.

Mapped area of wetland: 1 acres

Area of contributing drainage basin: 60 acres

Mapped elevation of wetland surface: 8015 ft

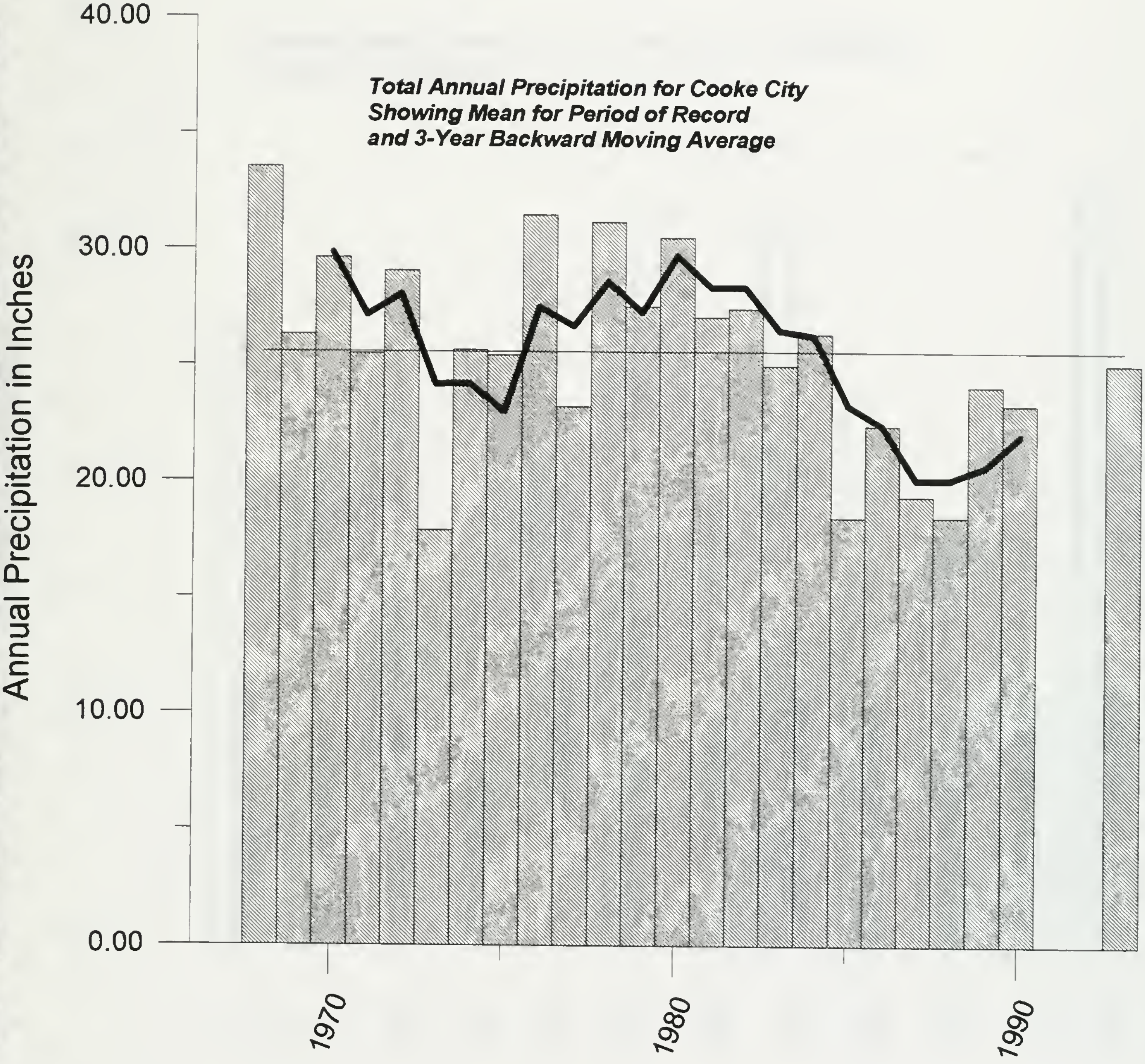
Maximum elevation within drainage basin: 8285 ft

Net relief of contributing basin: 270 ft

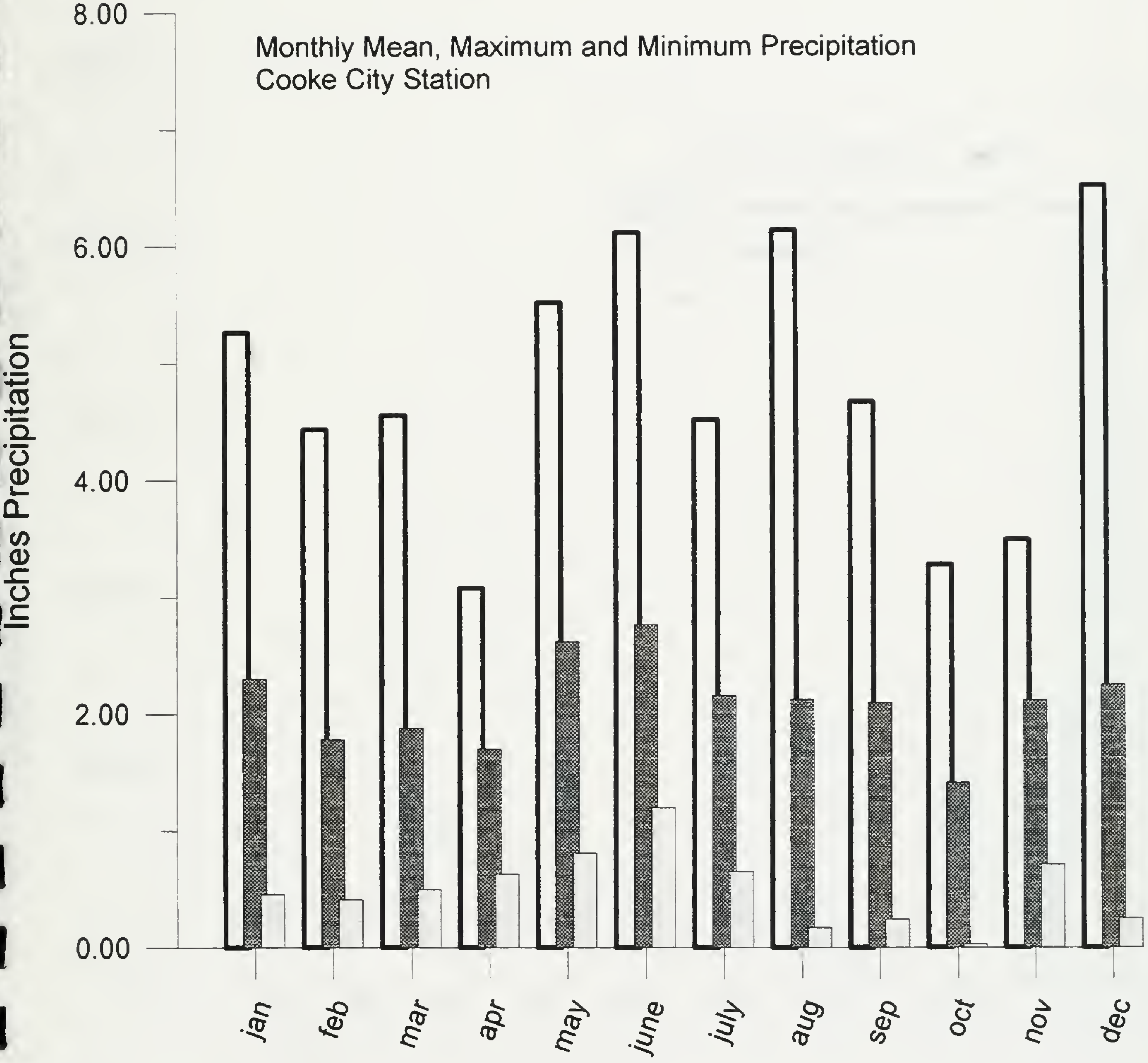
COE Hydrogeomorphic class: DEPRESSIONAL

Primary surficial geologic unit 112DRFT

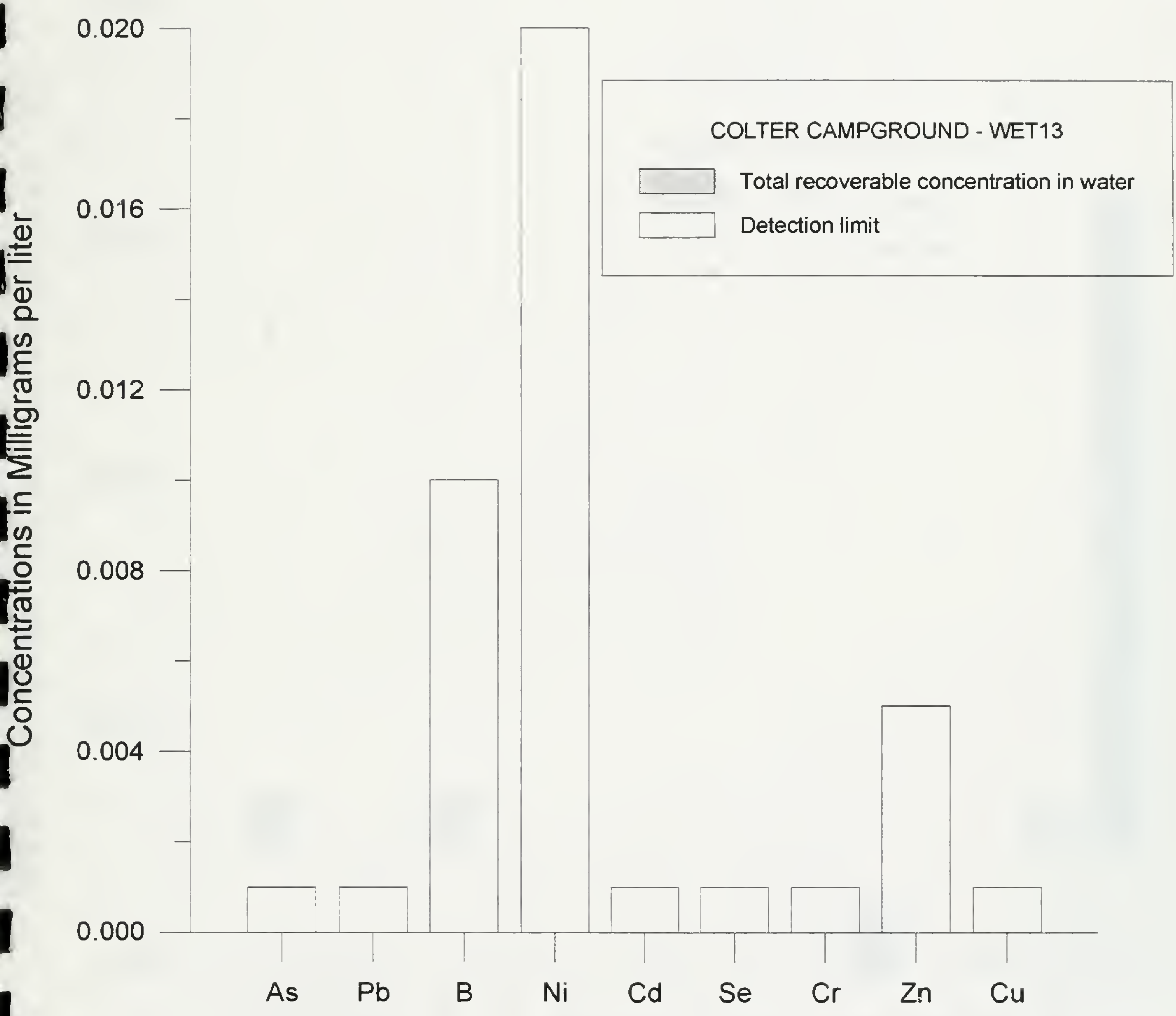
Primary bedrock geologic unit 400PCMB



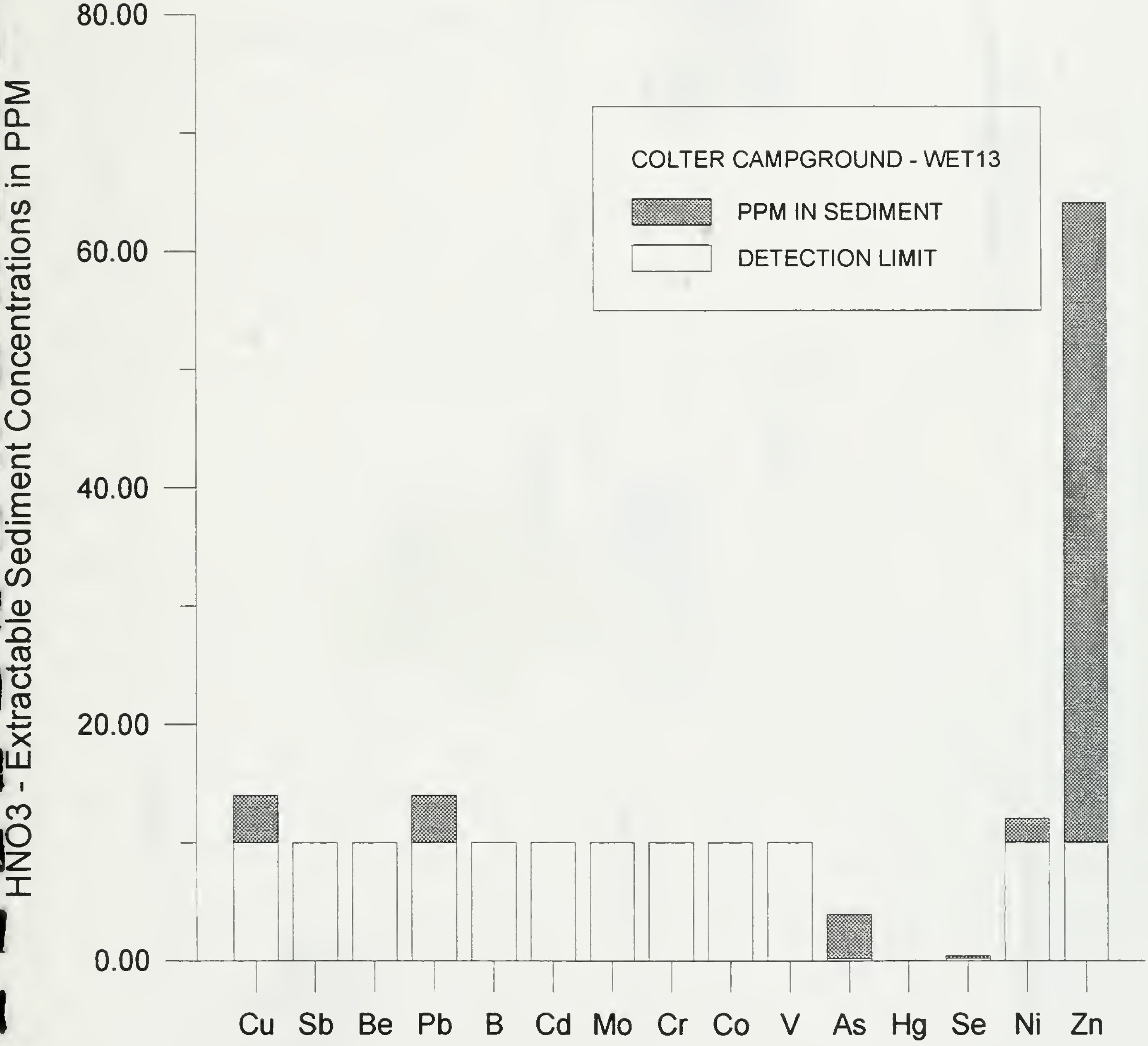
Total Annual Precipitation for Cooke City Showing Mean for Period of Record and 3-Year Backward Moving Average

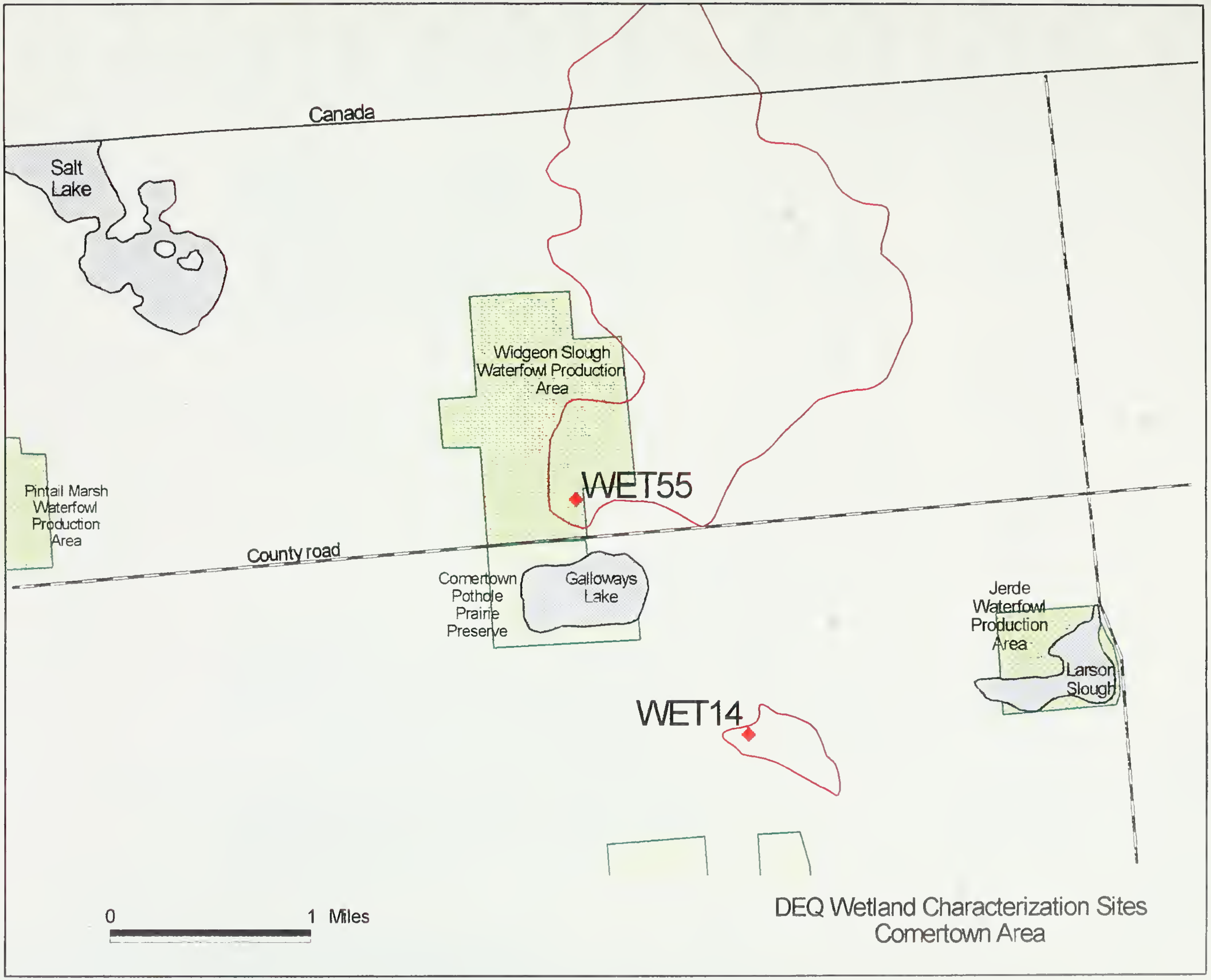


Monthly Mean, Maximum and Minimum Precipitation
Cooke City Station
Inches Precipitation
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec



COLTER CAMPGROUND - WET13
Total recoverable concentration in water
Detection limit
Concentrations in Milligrams per liter
0.020
0.016
0.012
0.008
0.004
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
80.00
60.00
40.00
20.00
0.00
COLTER CAMPGROUND - WET13
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn


Canada
Salt Lake
Widgeon Slough Waterfowl Production Area
WET55
Pintail Marsh Waterfowl Production Area
County road
Comertown Pothole Prairie Preserve
Galloways Lake
Jerde Waterfowl Production Area
Larson Slough
WET14
0
1 Miles

DEQ Wetland Characterization Sites
Comertown Area

Wetland: COMERTOWN PRESERVE Site Code: WET14

7.5 Minute Quad: LONE TREE LAKE
Lat: 48 57 15
Long: 104 13 40

Mean Annual Precipitation in Inches: 15.00

Mean Annual Potential Evaporation (Penman) in Inches: 35.00

'Net Precipitation' in Inches: -20.00

Site does not have a mapped surface inlet.

Site does not have a mapped surface outlet.

Site is not known to be artificially impounded.

Site does not have known significant water imports.

Mapped area of wetland: 27 acres

Area of contributing drainage basin: 75 acres

Mapped elevation of wetland surface: 2169 ft

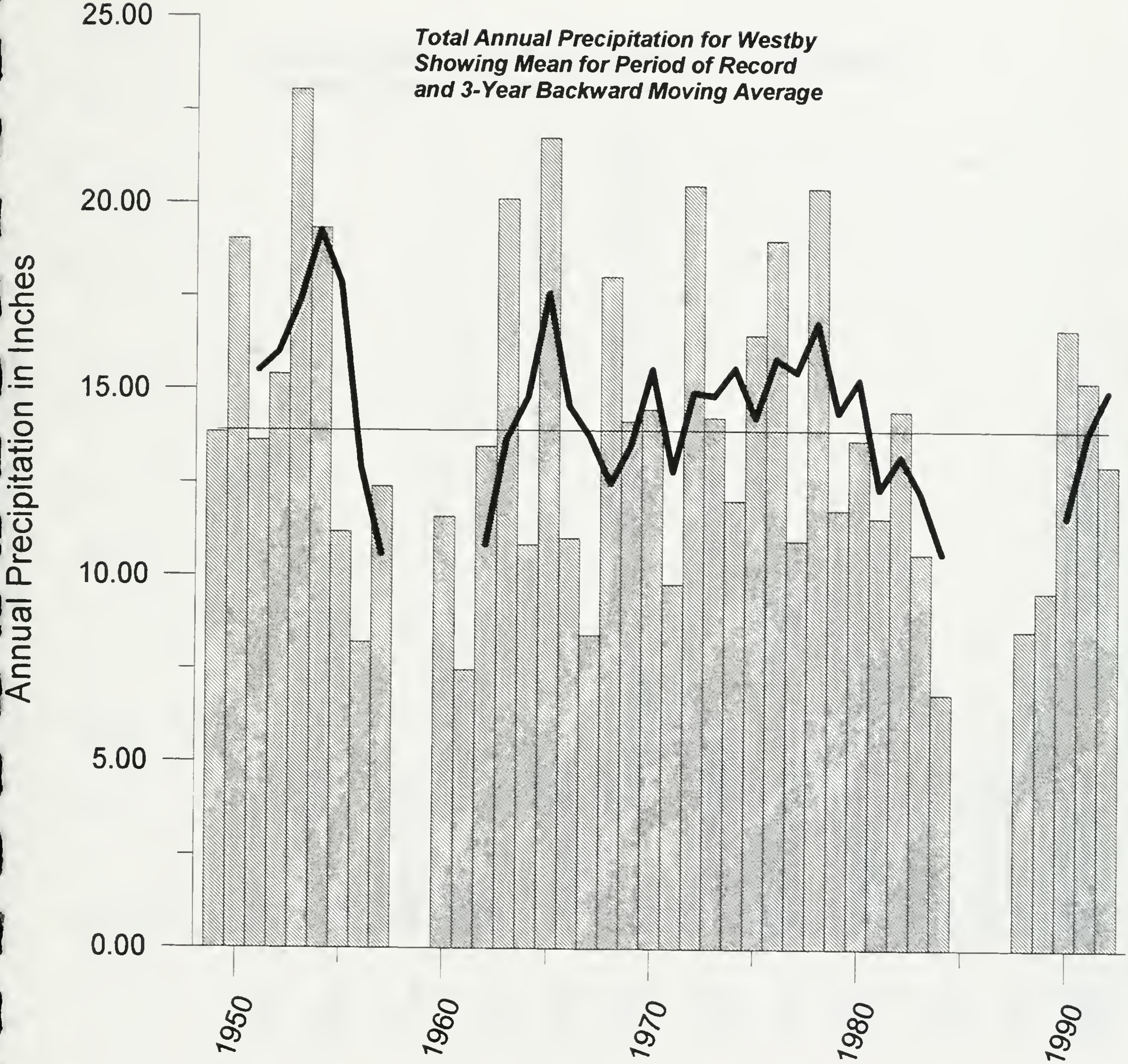
Maximum elevation within drainage basin: 2320 ft

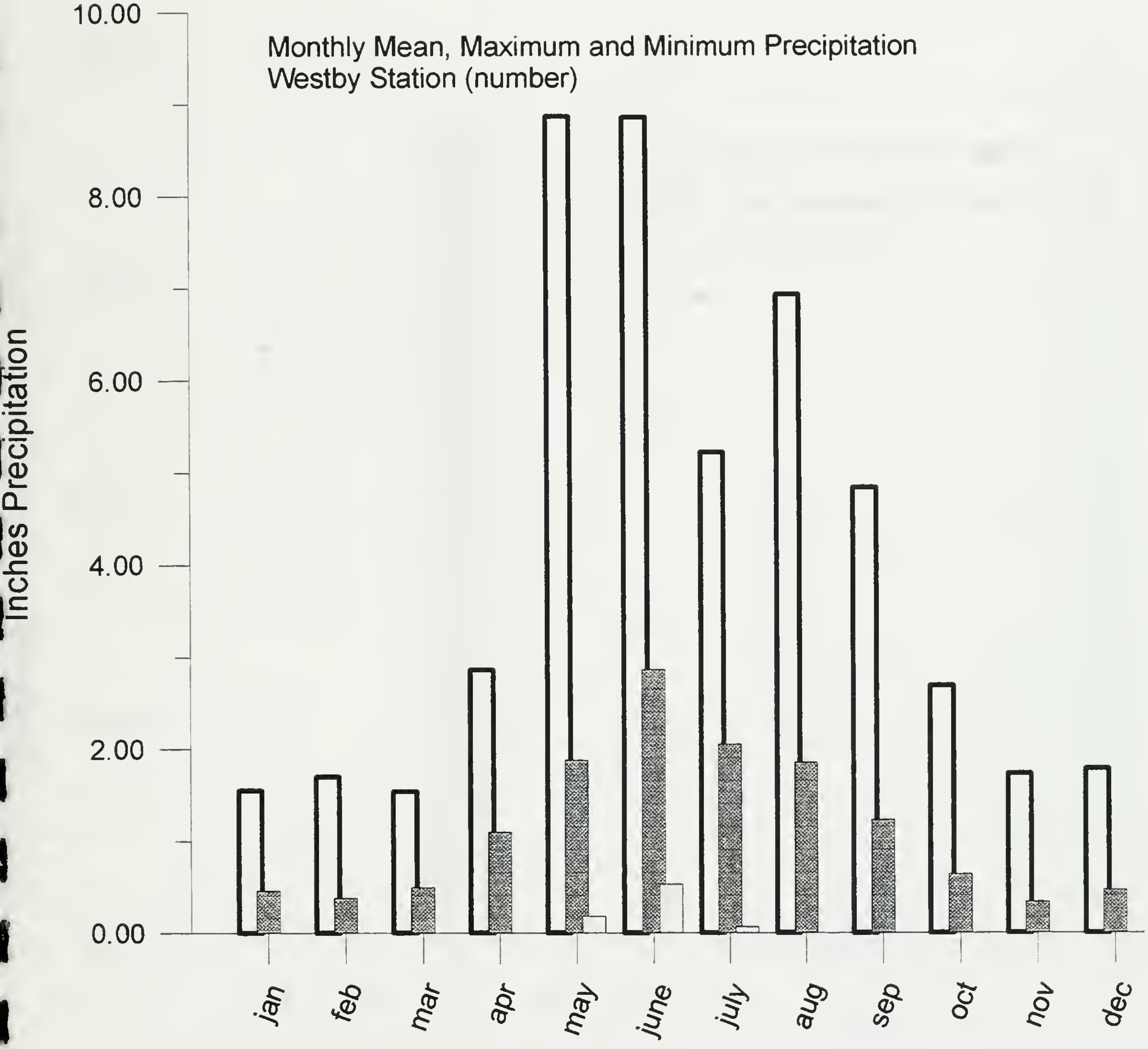
Net relief of contributing basin: 151 ft

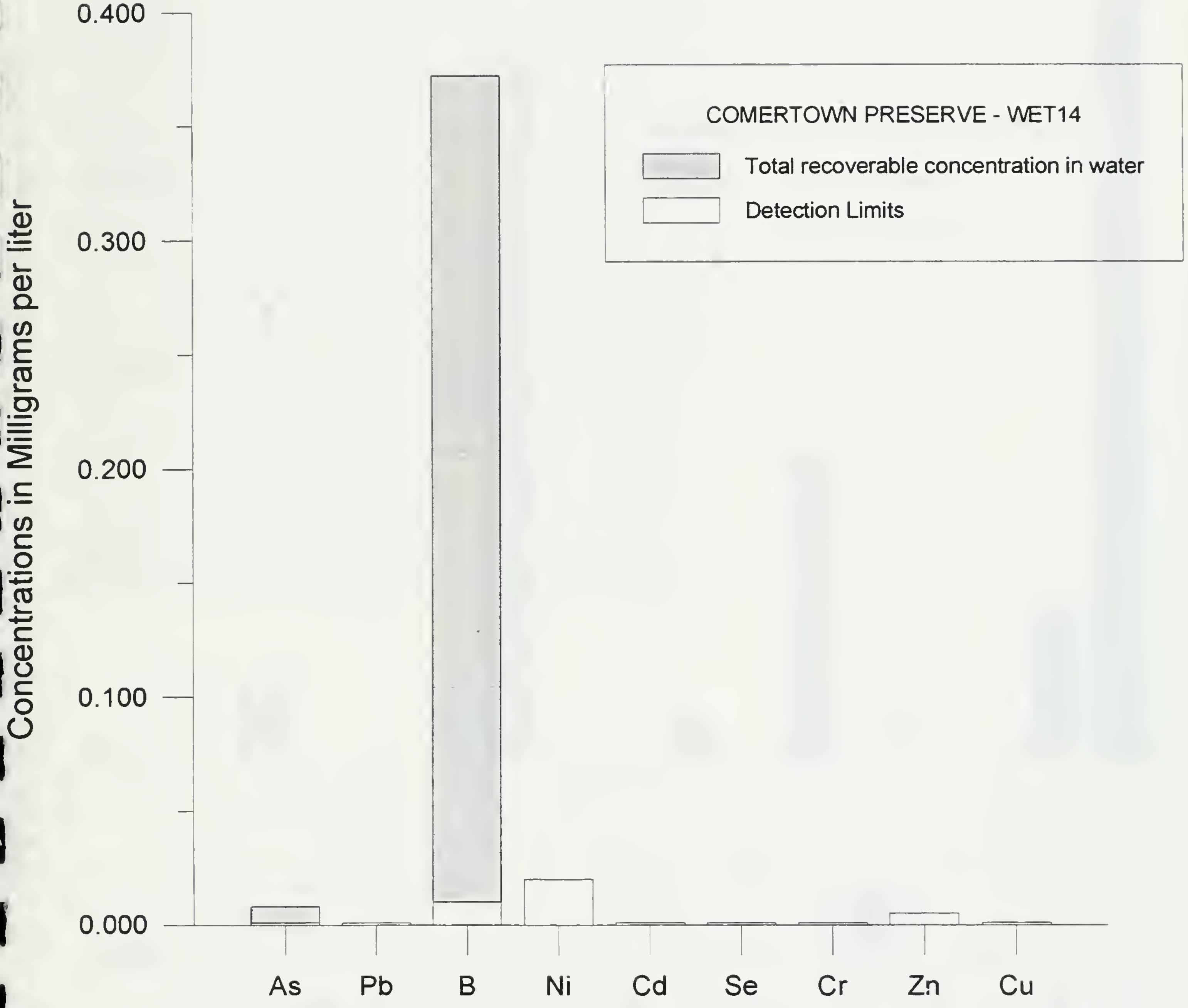
COE Hydrogeomorphic class: DEPRESSIONAL

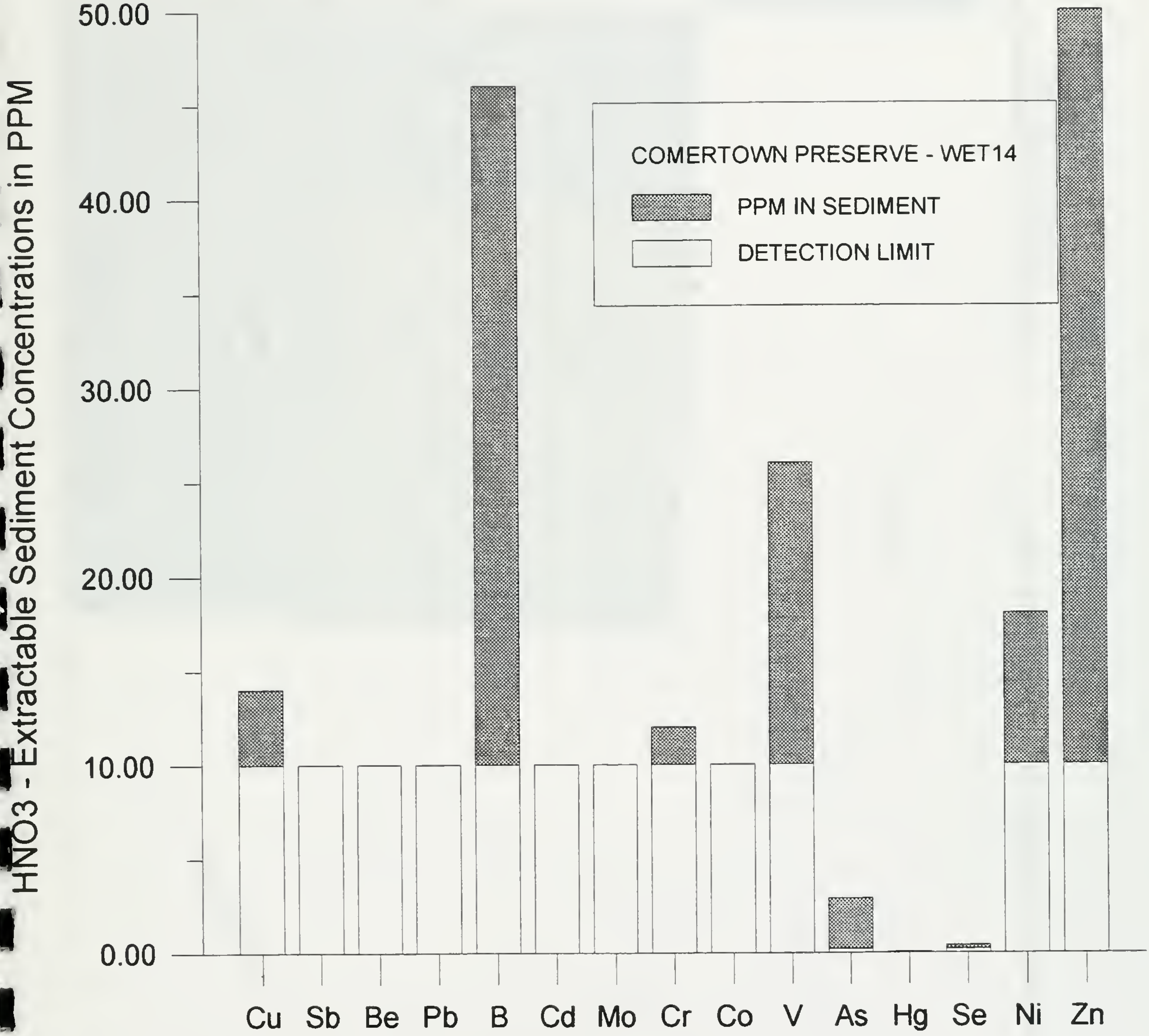
Primary surficial geologic unit 112TILL

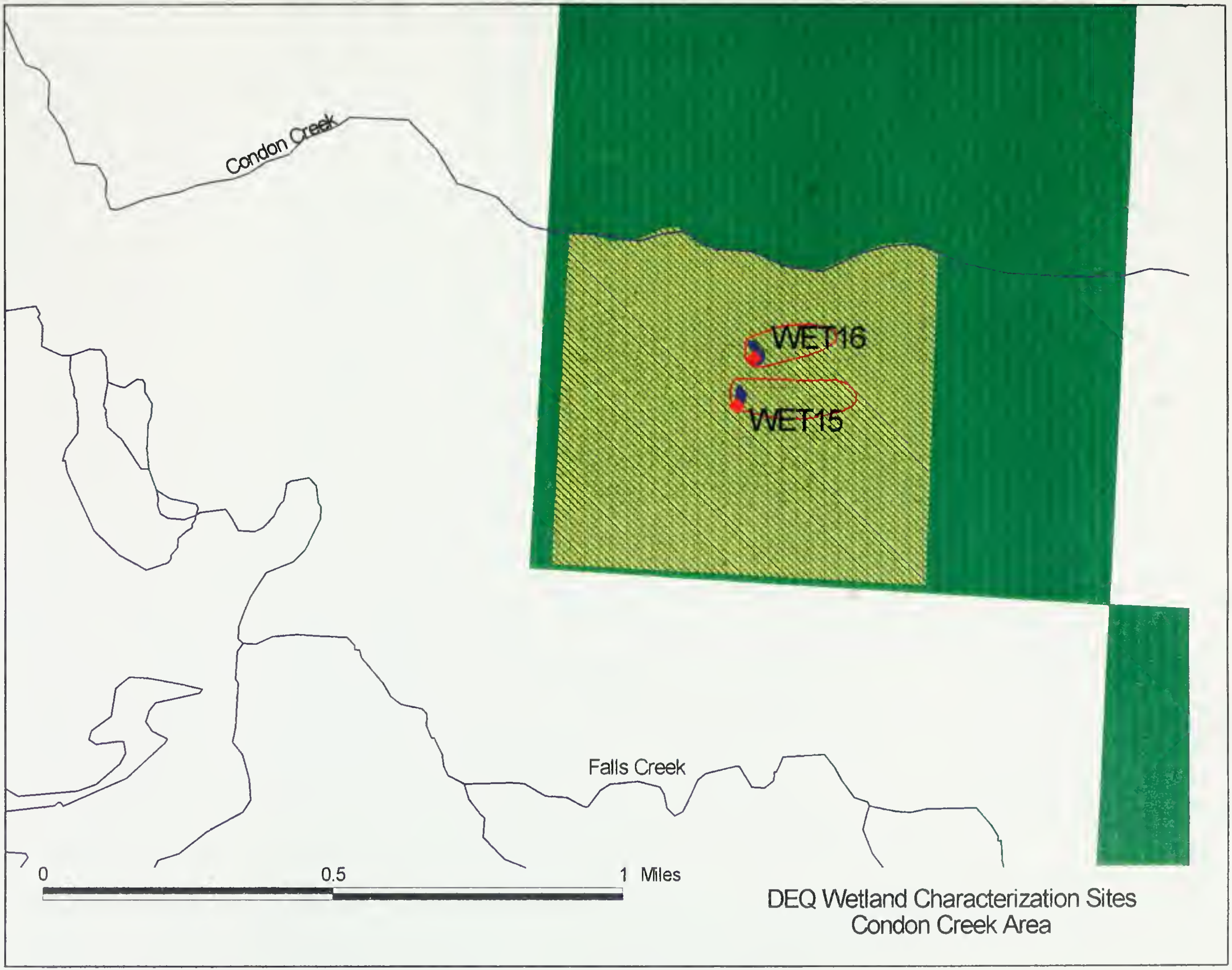
Primary bedrock geologic unit 125FRUN


Total Annual Precipitation for Westby
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1950
1960
1970
1980
1990


Monthly Mean, Maximum and Minimum Precipitation
Westby Station (number)
Inches Precipitation
10.00
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec


Concentrations in Milligrams per liter
0.400
0.300
0.200
0.100
0.000
COMERTOWN PRESERVE - WET14
Total recoverable concentration in water
Detection Limits
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
50.00
40.00
30.00
20.00
10.00
0.00
COMERTOWN PRESERVE - WET14
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Sites
Condon Creek Area

Wetland: CONDON CREEK PROPOSED RNA POND #1

Site Code: WET15

7.5 Minute Quad: CONDON

Lat: 47 34 33
Long: 113 42 10

Mean Annual Precipitation in Inches:	25.00
Mean Annual Potential Evaporation (Penman) in Inches:	33.00
'Net Precipitation' in Inches:	-8.00

Site does not have a mapped surface inlet.

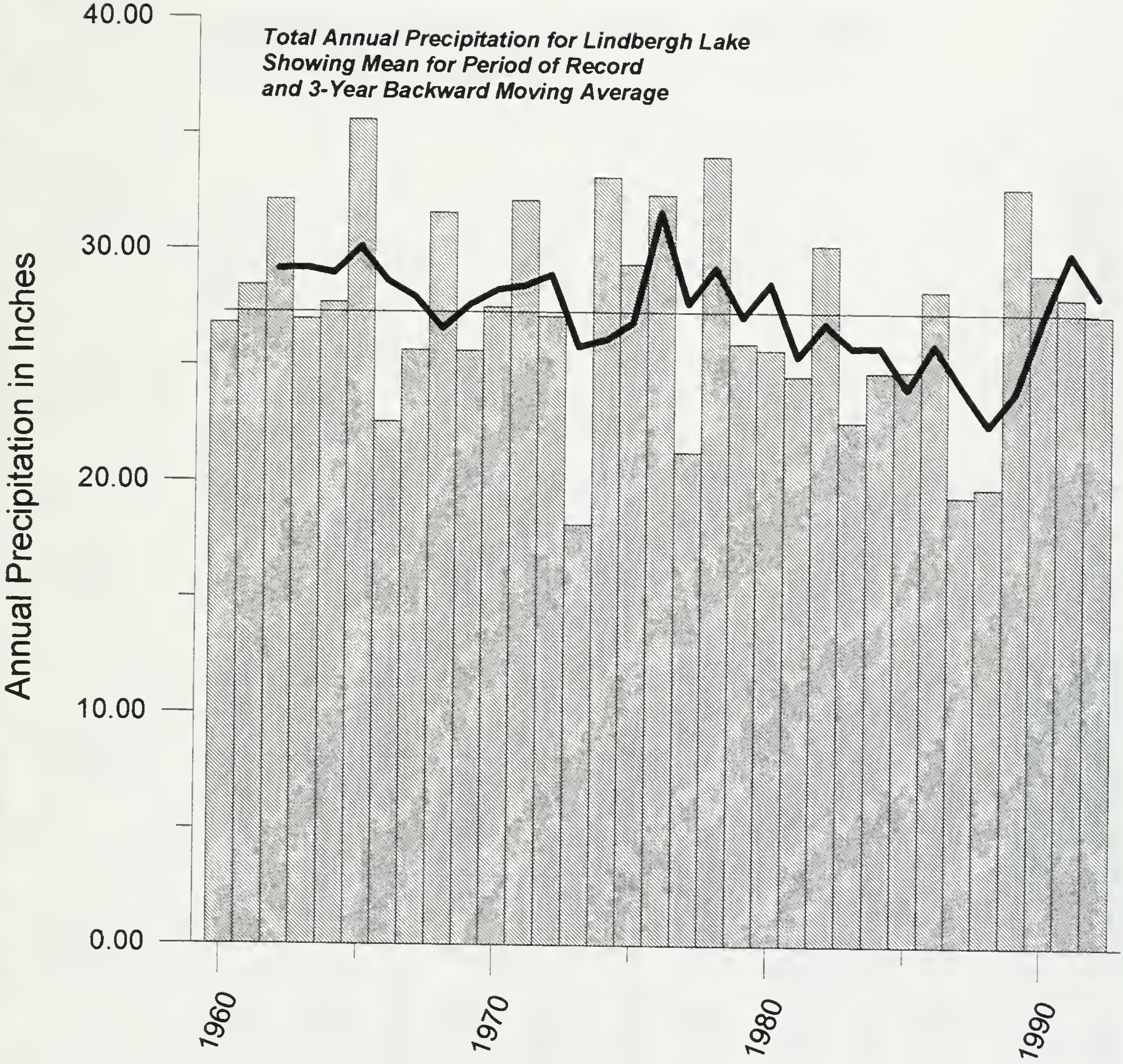
Site does not have a mapped surface outlet.

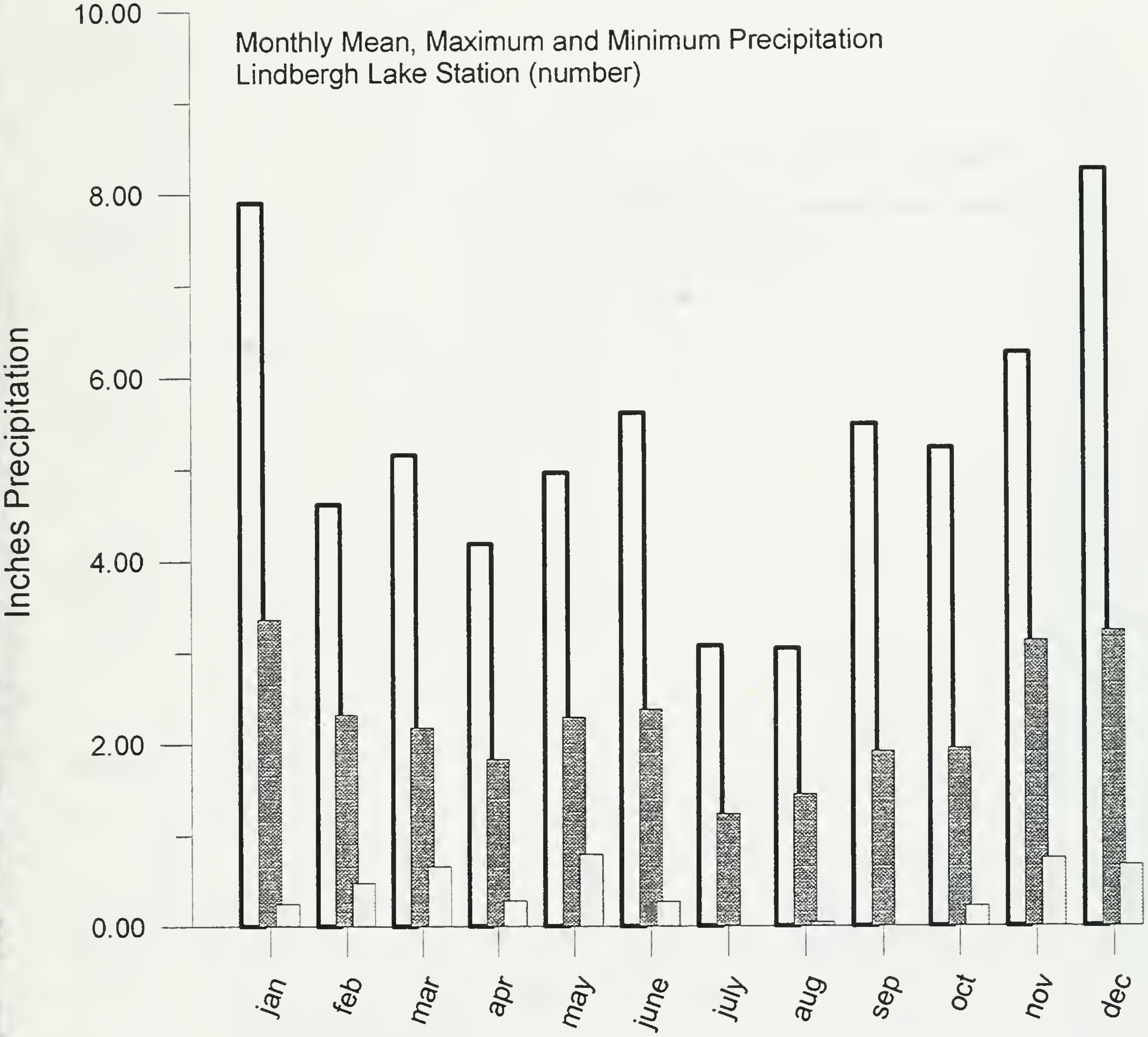
Site is not known to be artificially impounded.

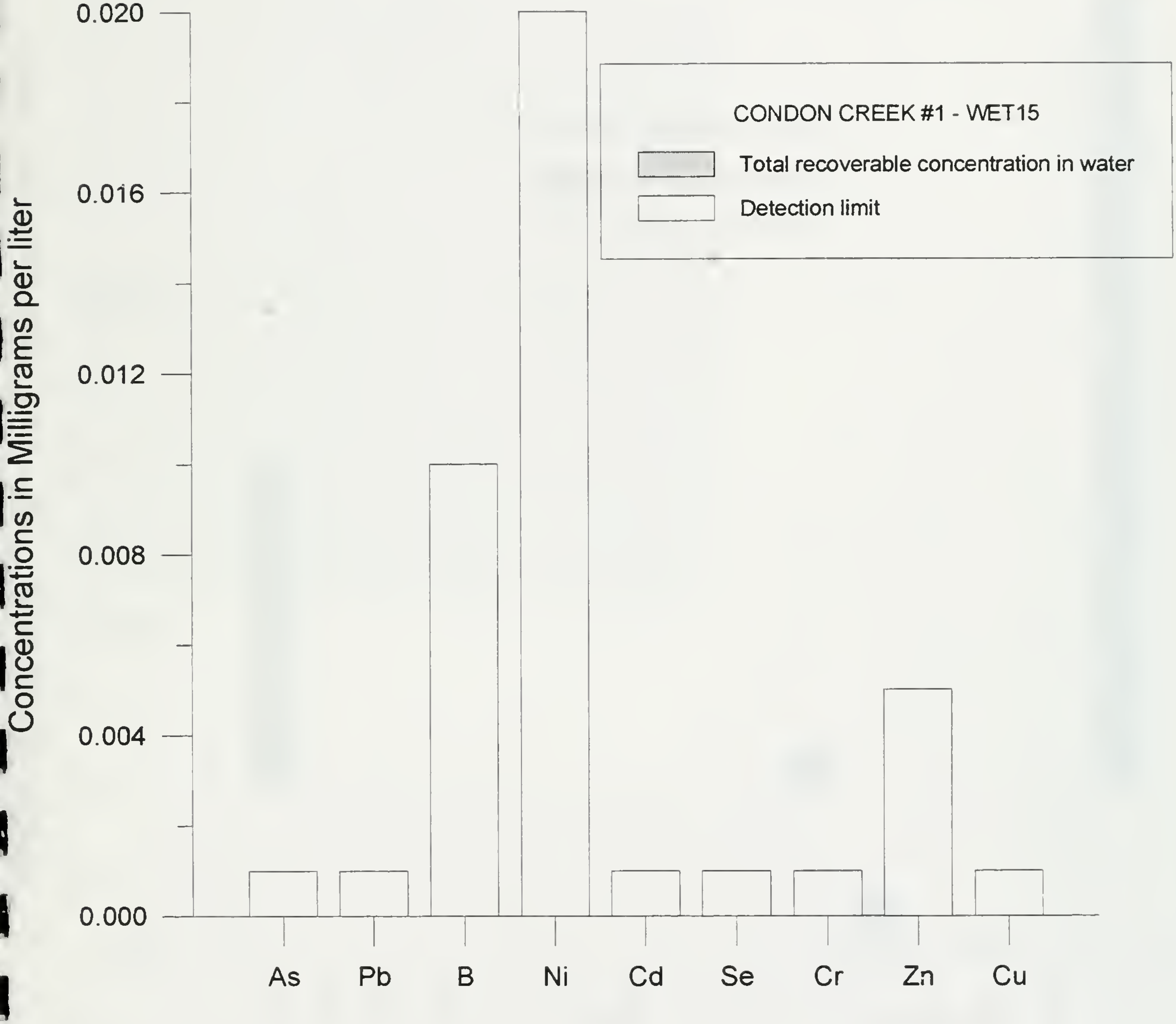
Site does not have known significant water imports.

Mapped area of wetland:	0 acres
Area of contributing drainage basin:	8 acres
Mapped elevation of wetland surface:	3740 ft
Maximum elevation within drainage basin:	3800 ft
Net relief of contributing basin:	60 ft

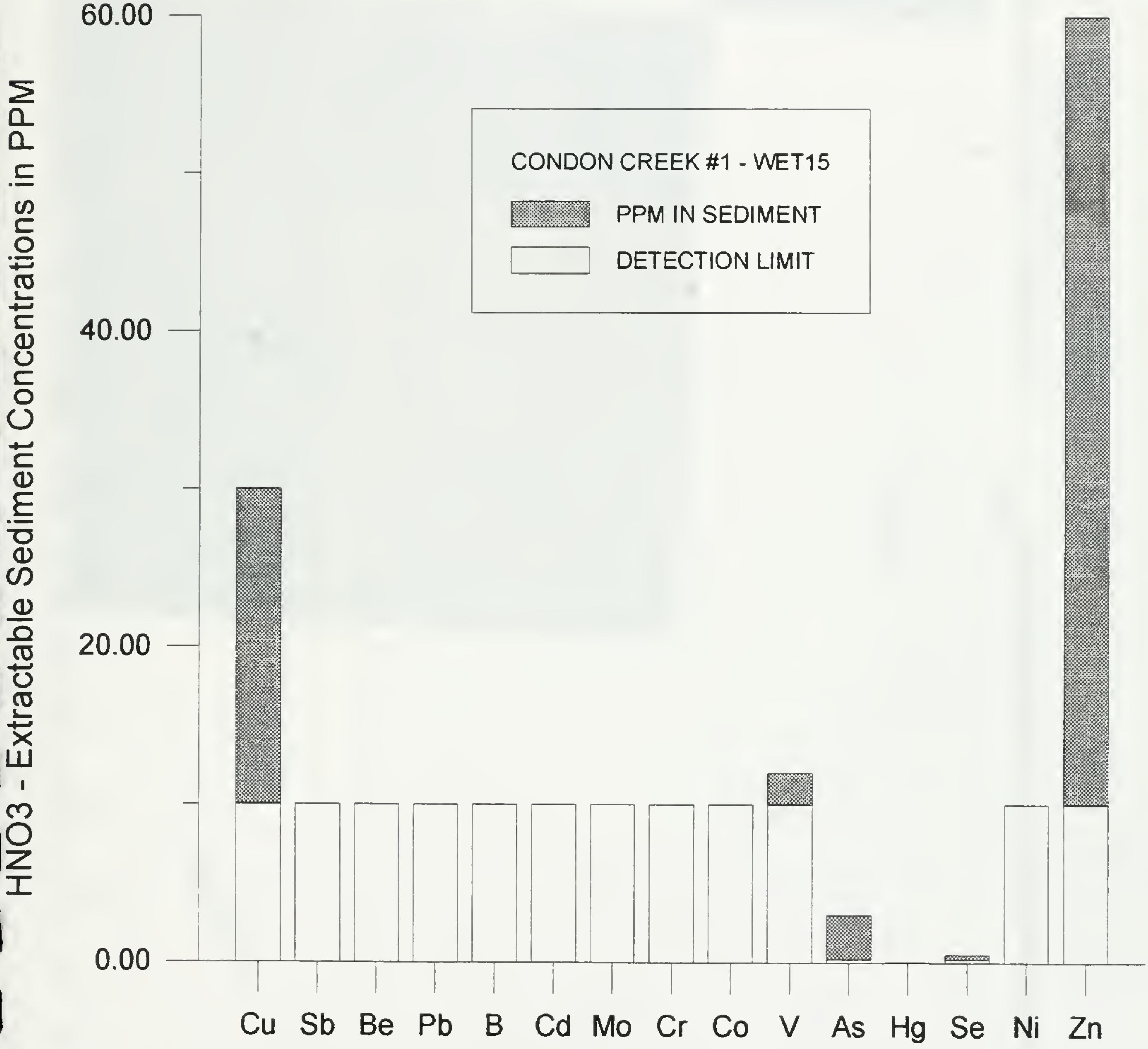
COE Hydrogeomorphic class:	DEPRESSIONAL
Primary surficial geologic unit	112TILL
Primary bedrock geologic unit	400BELT

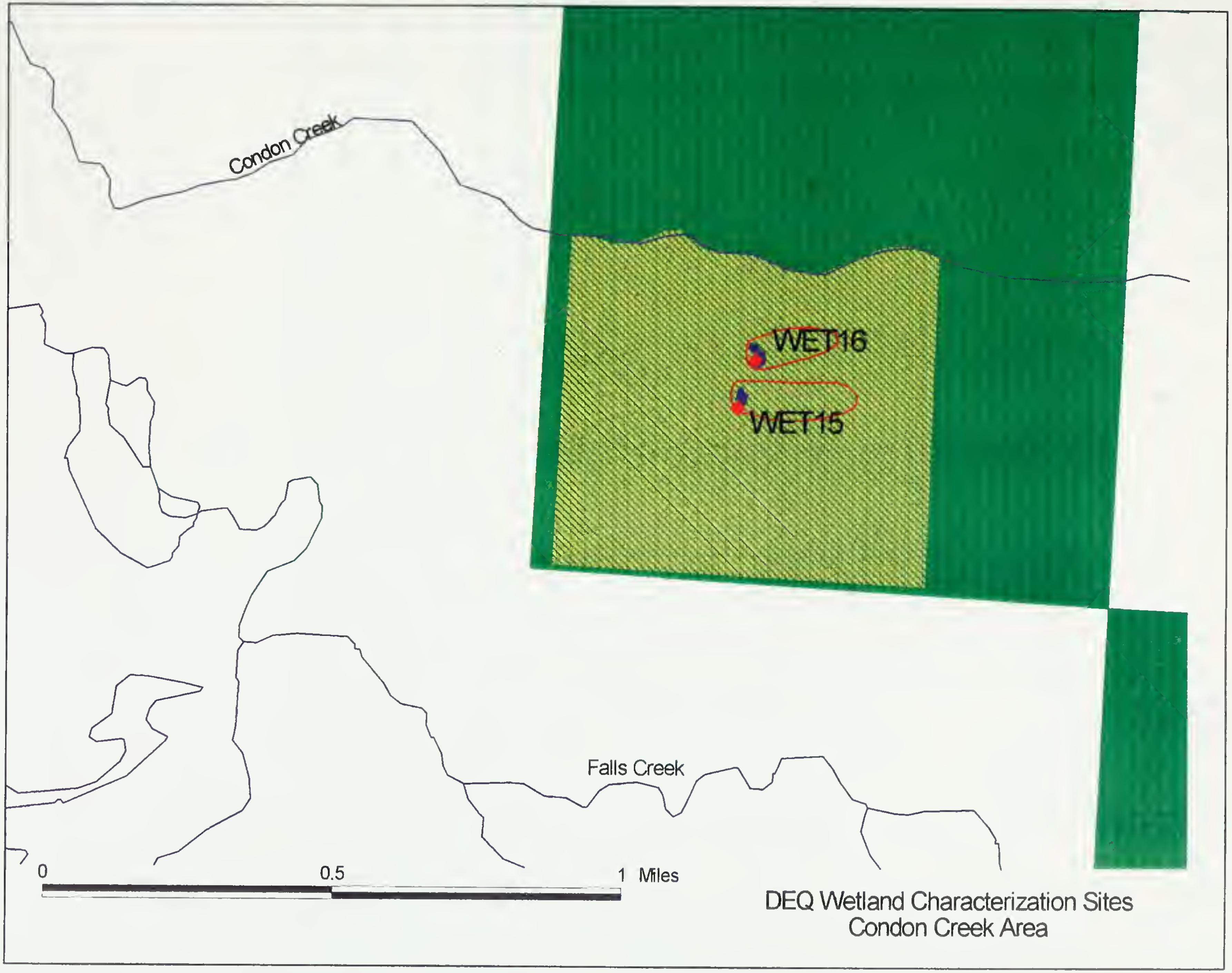

Total Annual Precipitation for Lindbergh Lake
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
40.00
30.00
20.00
10.00
0.00
1960
1970
1980
1990


Monthly Mean, Maximum and Minimum Precipitation
Lindbergh Lake Station (number)
Inches Precipitation
10.00
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec



Concentrations in Milligrams per liter
0.020
0.016
0.012
0.008
0.004
0.000
CONDON CREEK #1 - WET15
Total recoverable concentration in water
Detection limit
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
60.00
40.00
20.00
0.00
CONDON CREEK #1 - WET15
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Sites
Condon Creek Area

Wetland: CONDON CREEK PROPOSED RNA POND #2 Site Code: WET16

7.5 Minute Quad: CONDON

Lat: 47 34 36
Long: 113 42 10

Mean Annual Precipitation in Inches: 25.00

Mean Annual Potential Evaporation (Penman) in Inches: 33.00

'Net Precipitation' in Inches: -8.00

Site does not have a mapped surface inlet.

Site does not have a mapped surface outlet.

Site is not known to be artificially impounded.

Site does not have known significant water imports.

Mapped area of wetland: 0 acres

Area of contributing drainage basin: 5 acres

Mapped elevation of wetland surface: 3745 ft

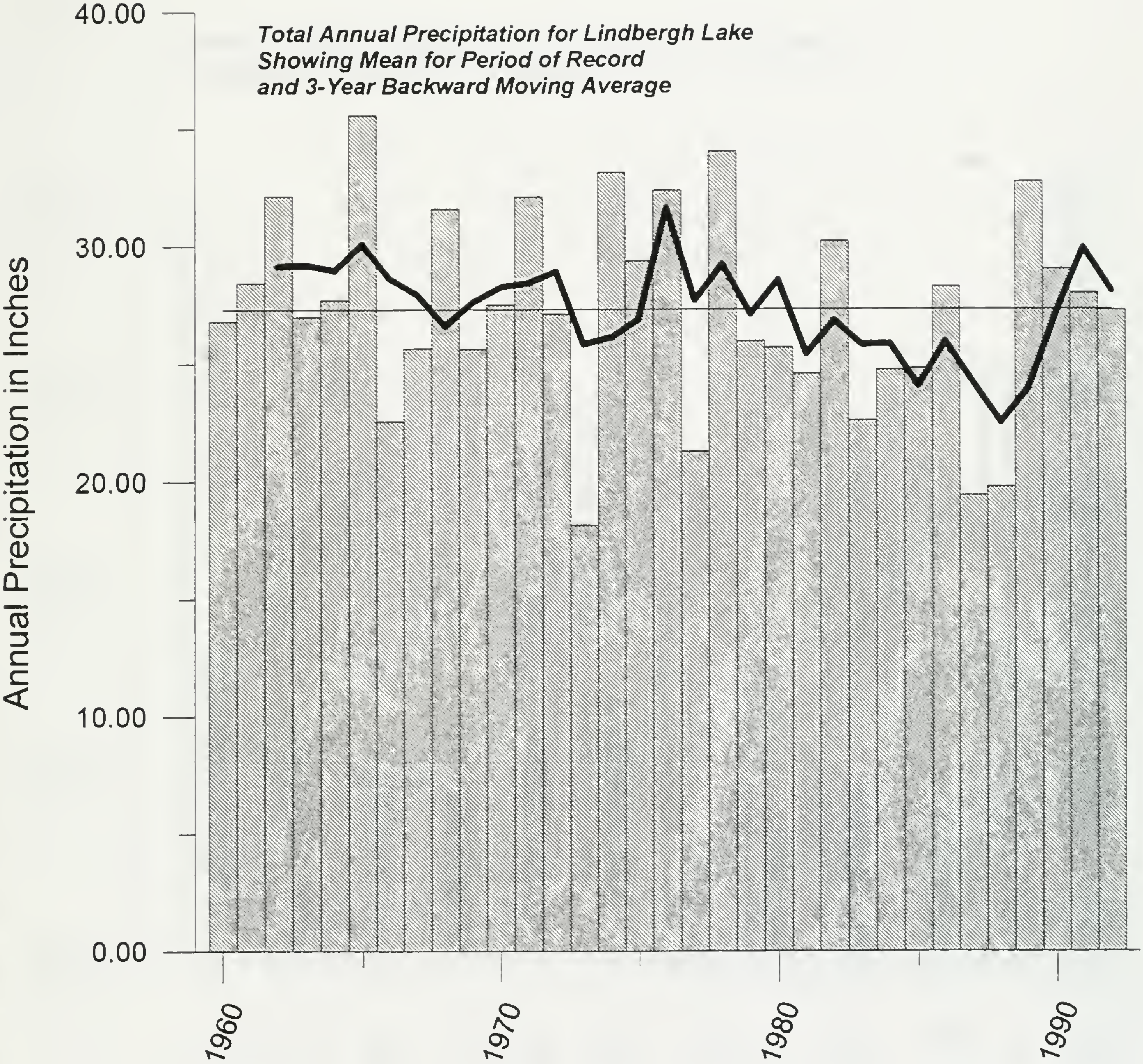
Maximum elevation within drainage basin: 3800 ft

Net relief of contributing basin: 55 ft

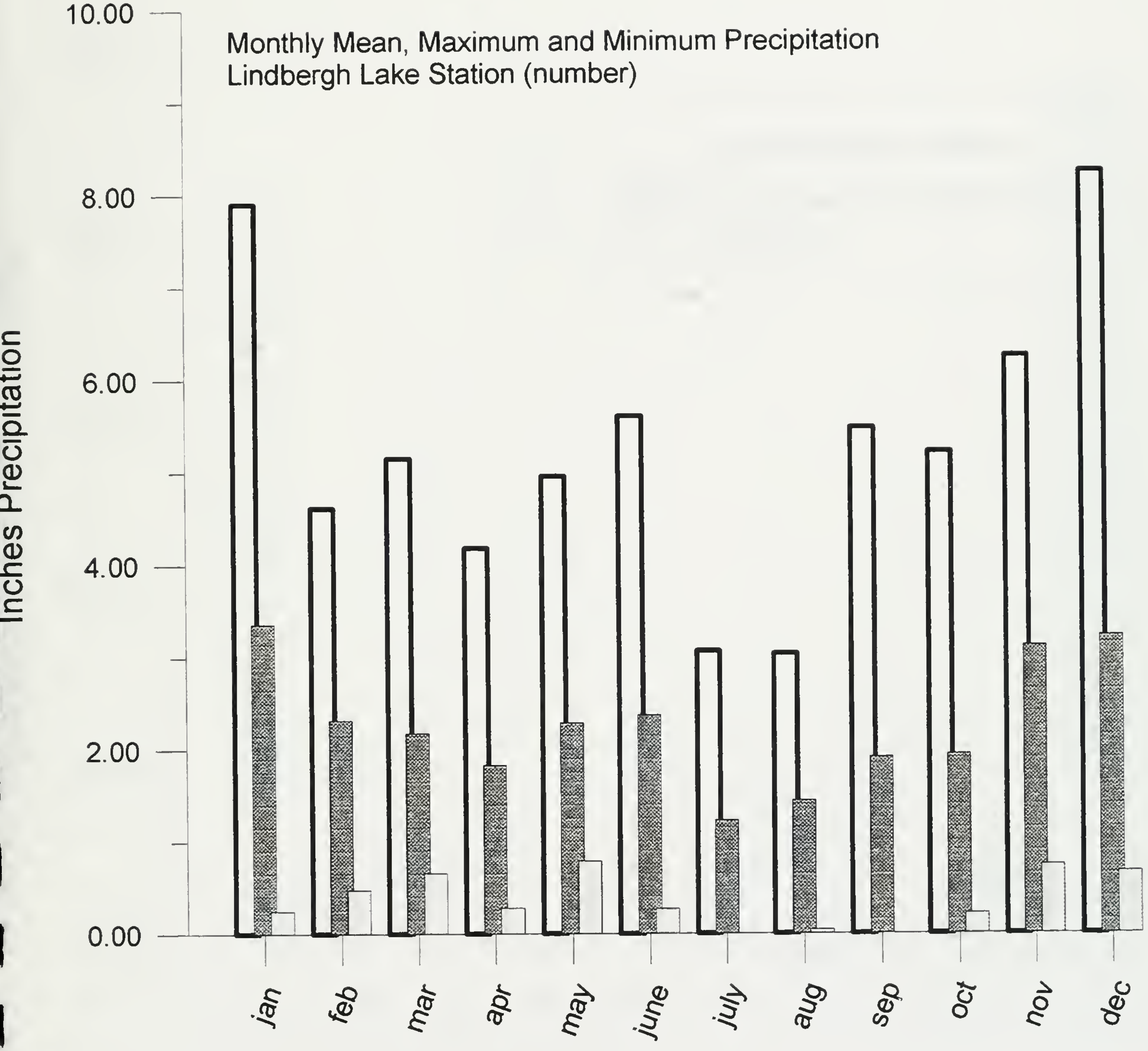
COE Hydrogeomorphic class: DEPRESSIONAL

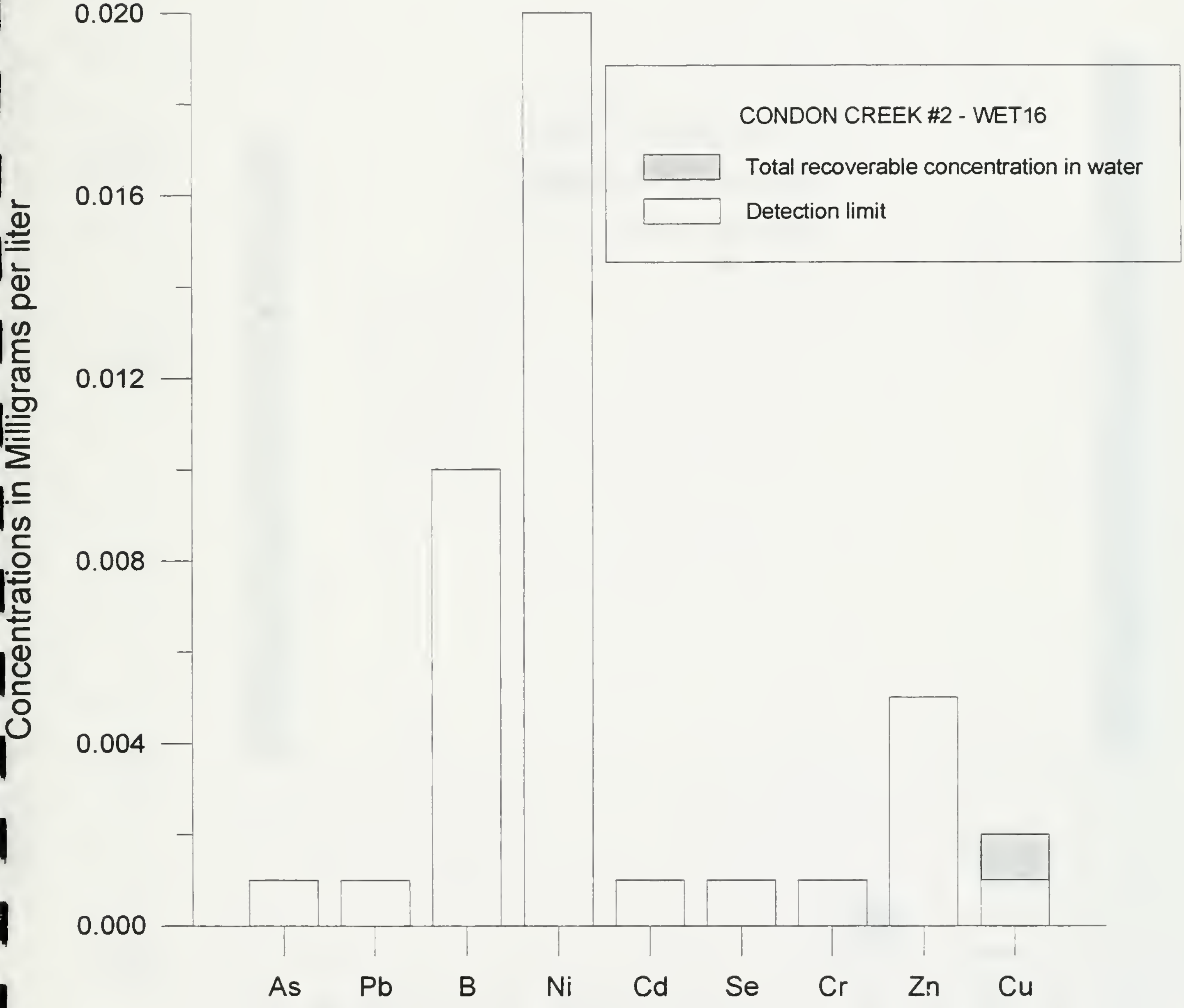
Primary surficial geologic unit 112TILL

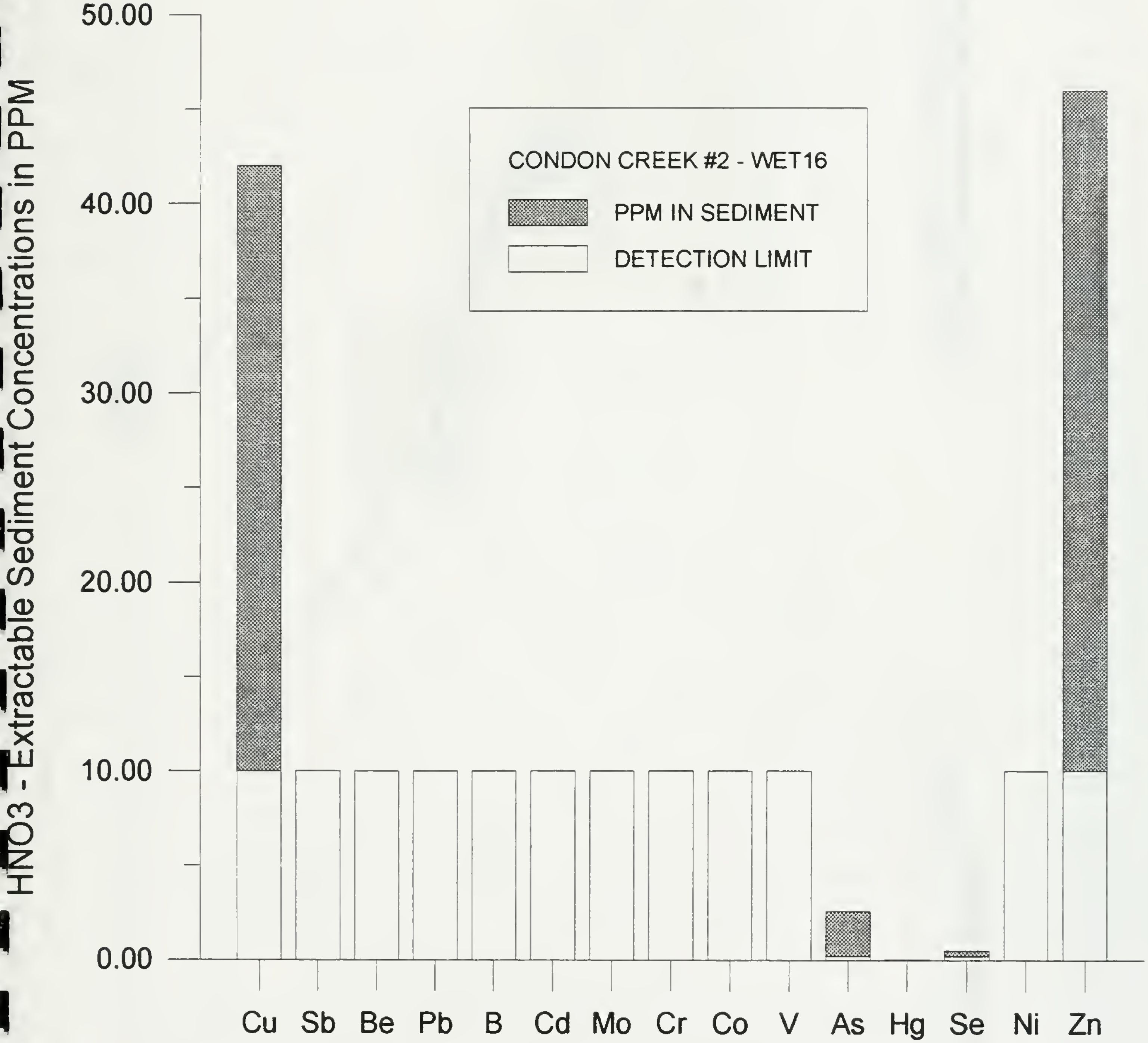
Primary bedrock geologic unit 400BELT

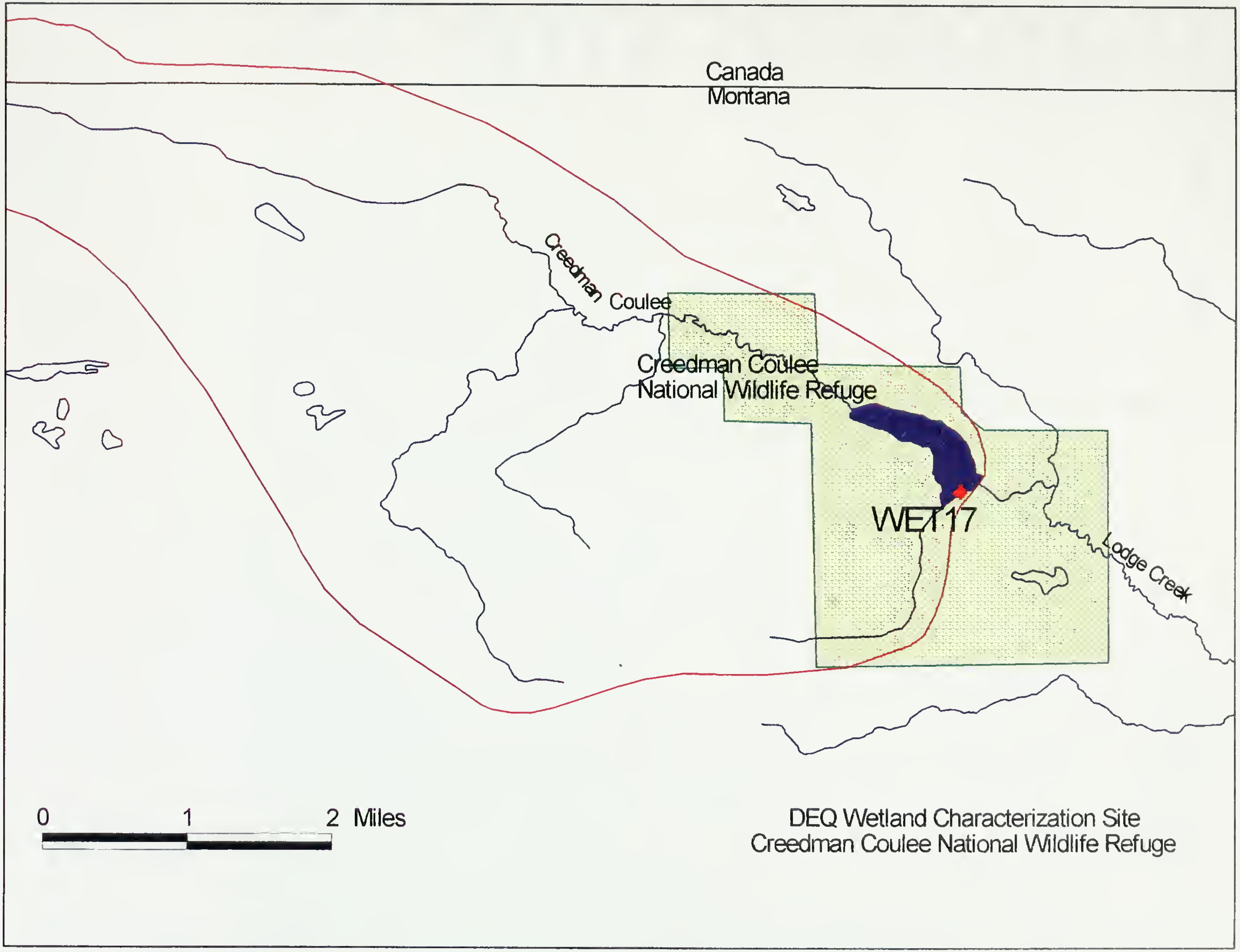


Total Annual Precipitation for Lindbergh Lake Showing Mean for Period of Record and 3-Year Backward Moving Average


Monthly Mean, Maximum and Minimum Precipitation
Lindbergh Lake Station (number)
Inches Precipitation
10.00
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec


Concentrations in Milligrams per liter
0.020
0.016
0.012
0.008
0.004
0.000
CONDON CREEK #2 - WET16
Total recoverable concentration in water
Detection limit
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
50.00
40.00
30.00
20.00
10.00
0.00
CONDON CREEK #2 - WET16
▨ PPM IN SEDIMENT
☐ DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Creedman Coulee National Wildlife Refuge

Wetland: CREEDMAN COULEE NWR	Site Code: WET17
7.5 Minute Quad: CREEDMAN COULEE	Lat: 48 57 35 Long: 109 45 5

Mean Annual Precipitation in Inches:	11.00
Mean Annual Potential Evaporation (Penman) in Inches:	36.00
'Net Precipitation' in Inches:	-25.00

Site has a mapped surface inlet.

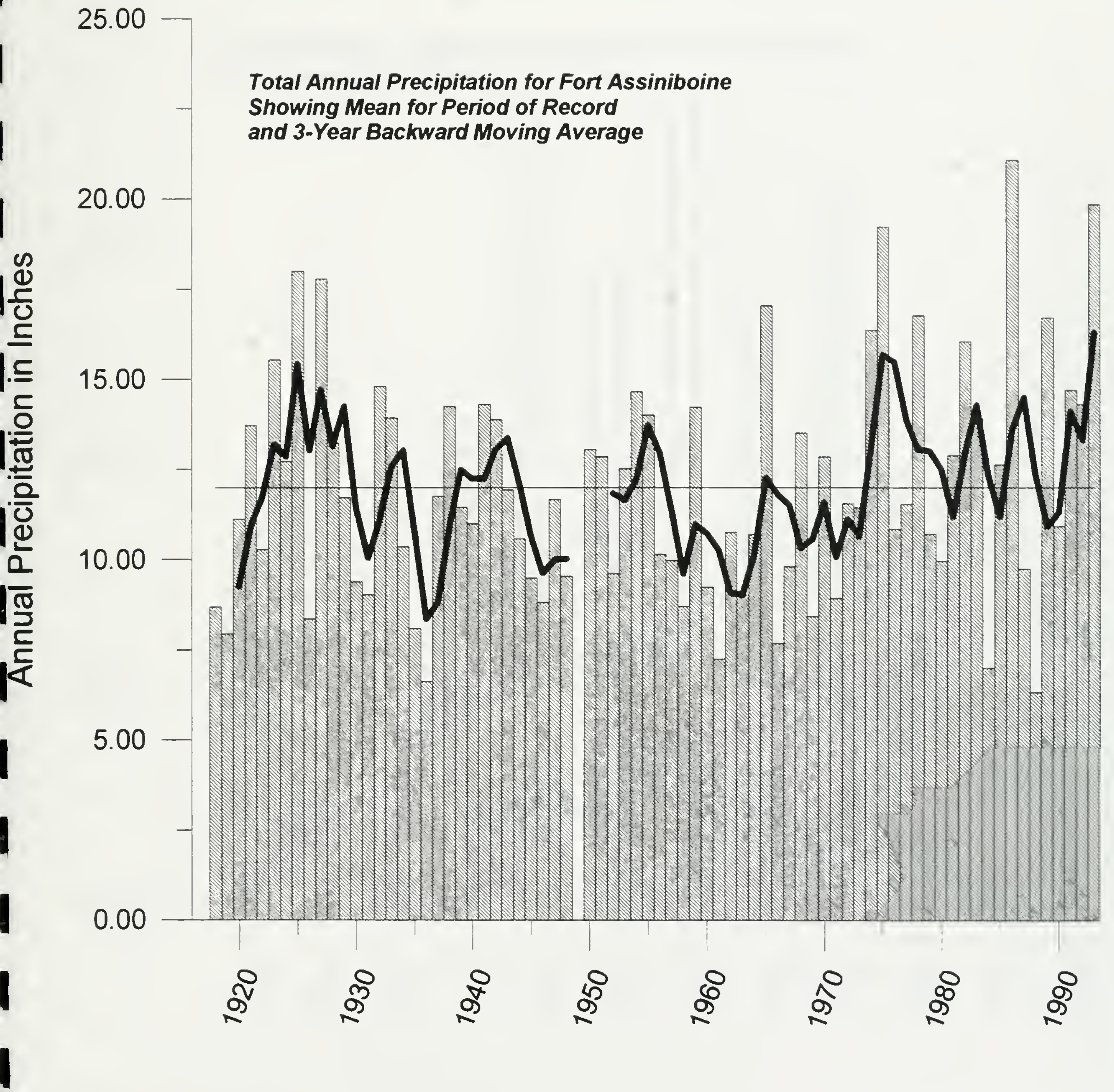
Site has a mapped surface outlet.

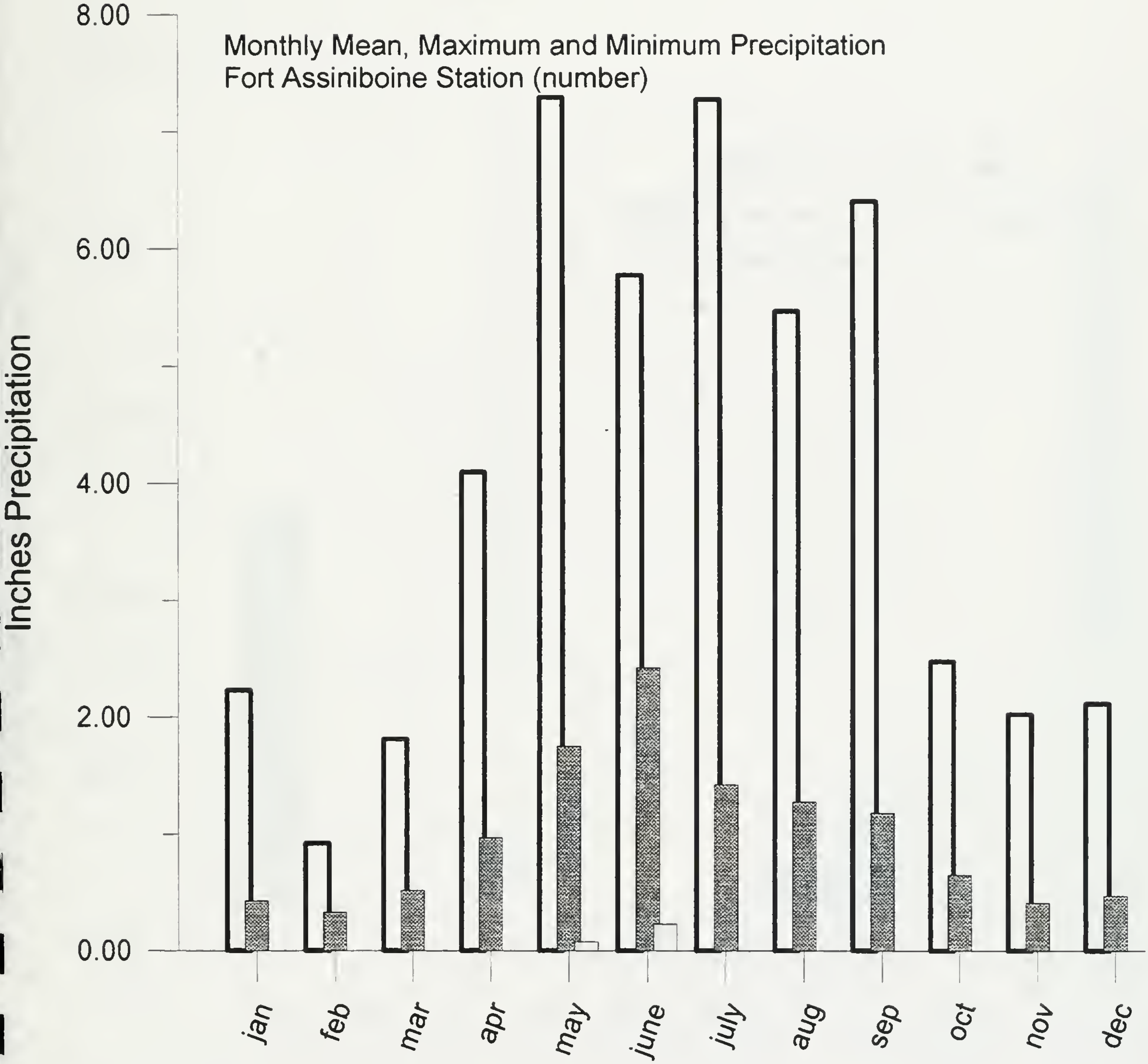
Site is artificially impounded.

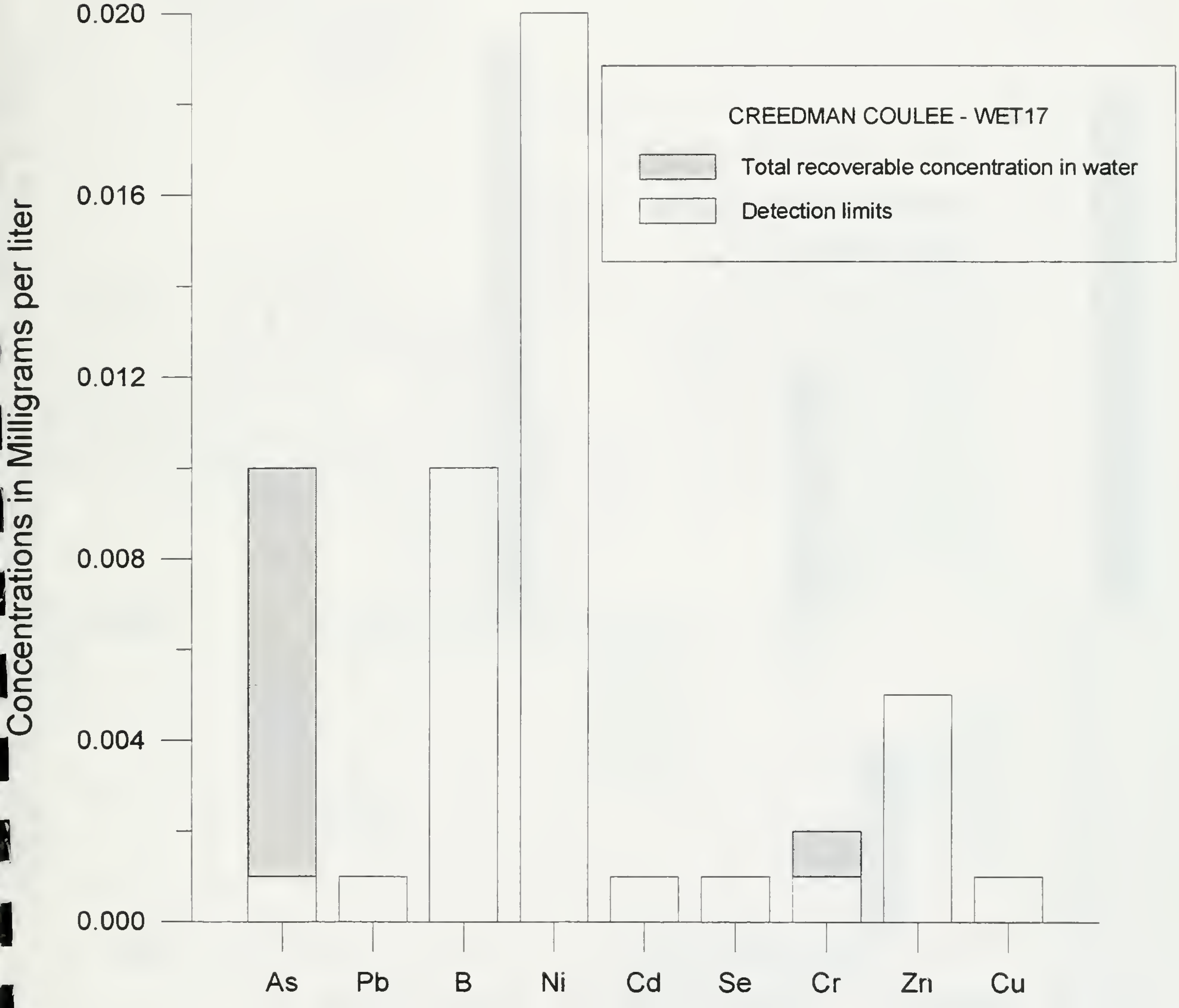
Site does not have known significant water imports.

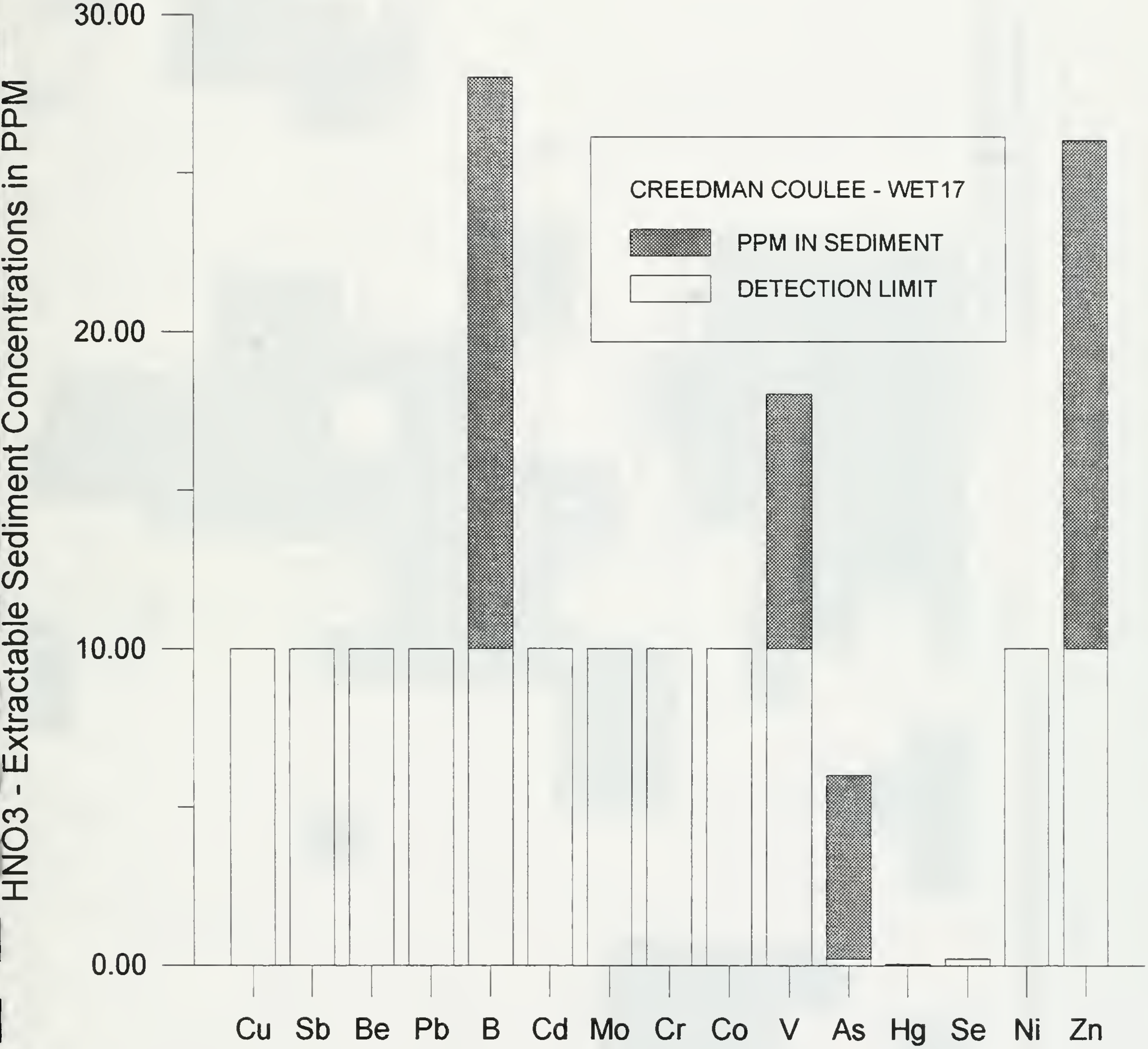
Mapped area of wetland:	135 acres
Area of contributing drainage basin:	13570 acres
Mapped elevation of wetland surface:	2750 ft
Maximum elevation within drainage basin:	3035 ft
Net relief of contributing basin:	285 ft

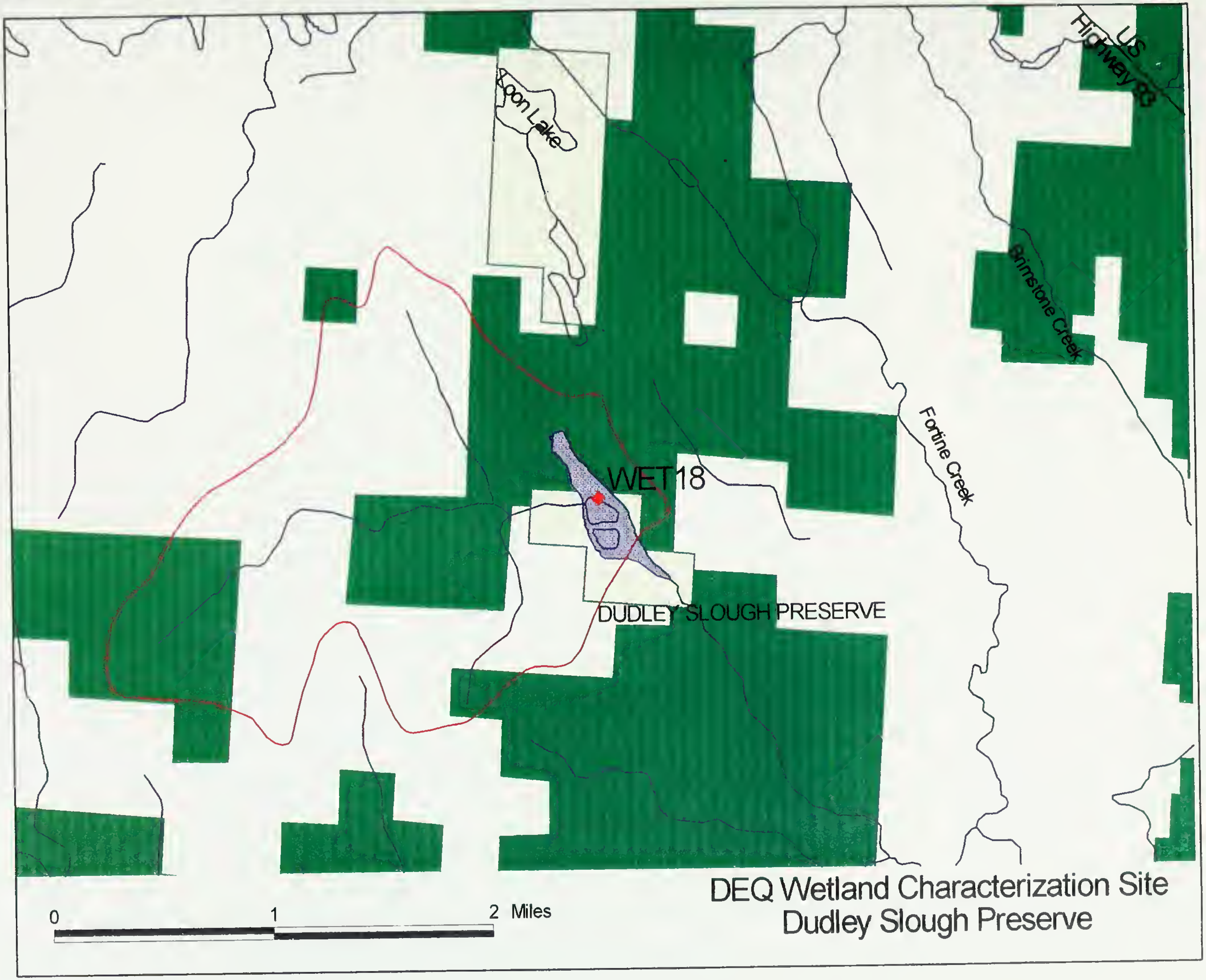
COE Hydrogeomorphic class:	DEPRESSIONAL
Primary surficial geologic unit	112TILL
Primary bedrock geologic unit	211BRPW


Total Annual Precipitation for Fort Assiniboine
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1920
1930
1940
1950
1960
1970
1980
1990


Monthly Mean, Maximum and Minimum Precipitation
Fort Assiniboine Station (number)


CREEDMAN COULEE - WET17
Total recoverable concentration in water
Detection limits
Concentrations in Milligrams per liter
0.020
0.016
0.012
0.008
0.004
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
30.00
20.00
10.00
0.00
CREEDMAN COULEE - WET17
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Dudley Slough Preserve

Wetland: DUDLEY SLOUGH PRESERVE	Site Code: WET18
7.5 Minute Quad: EDNA MOUNTAIN	Lat: 48 42 20 Long: 114 55 10

Mean Annual Precipitation in Inches:	19.00
Mean Annual Potential Evaporation (Penman) in Inches:	31.00
'Net Precipitation' in Inches:	-12.00

Site has a mapped surface inlet.

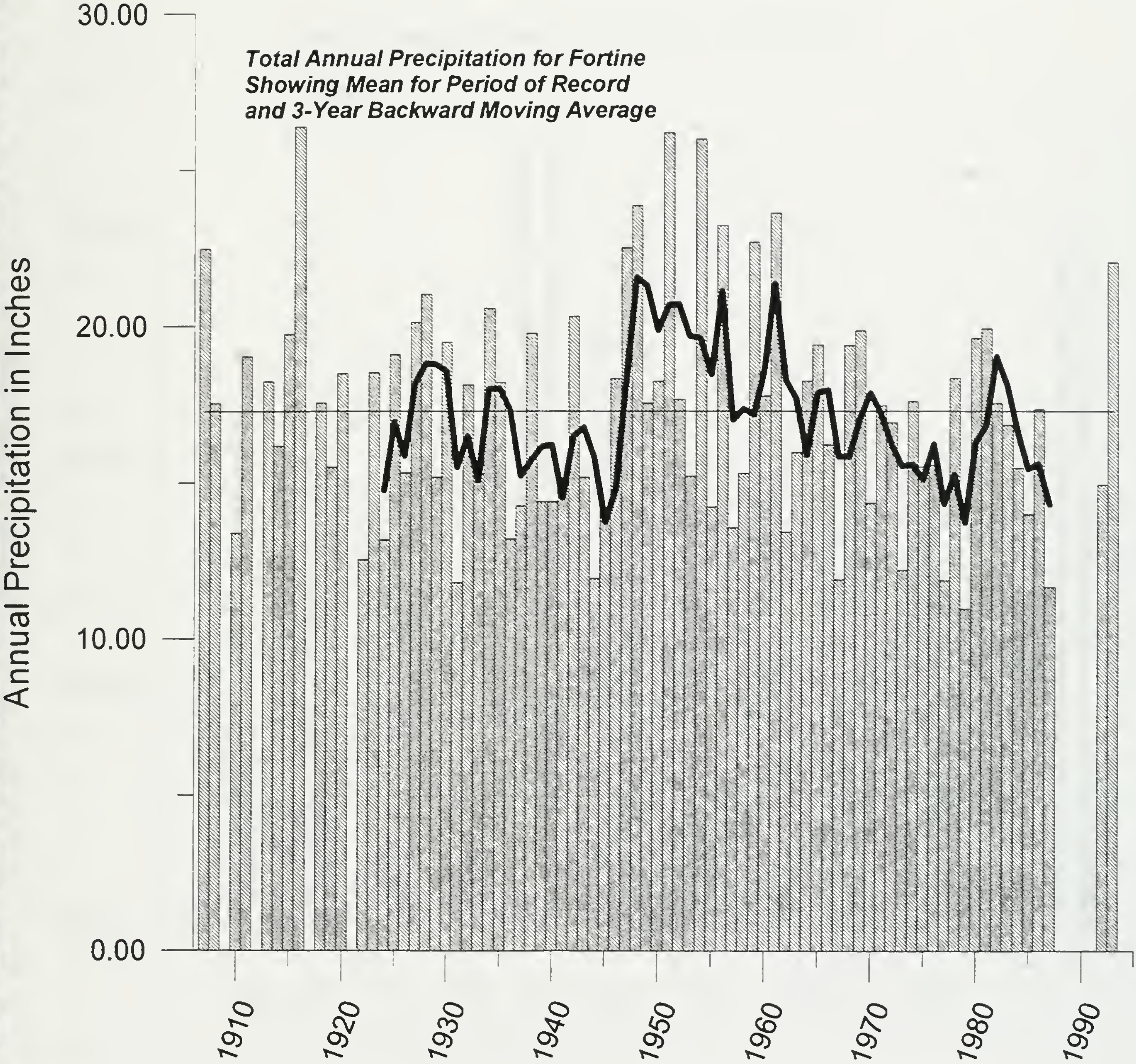
Site has a mapped surface outlet.

Site is not known to be artificially impounded.

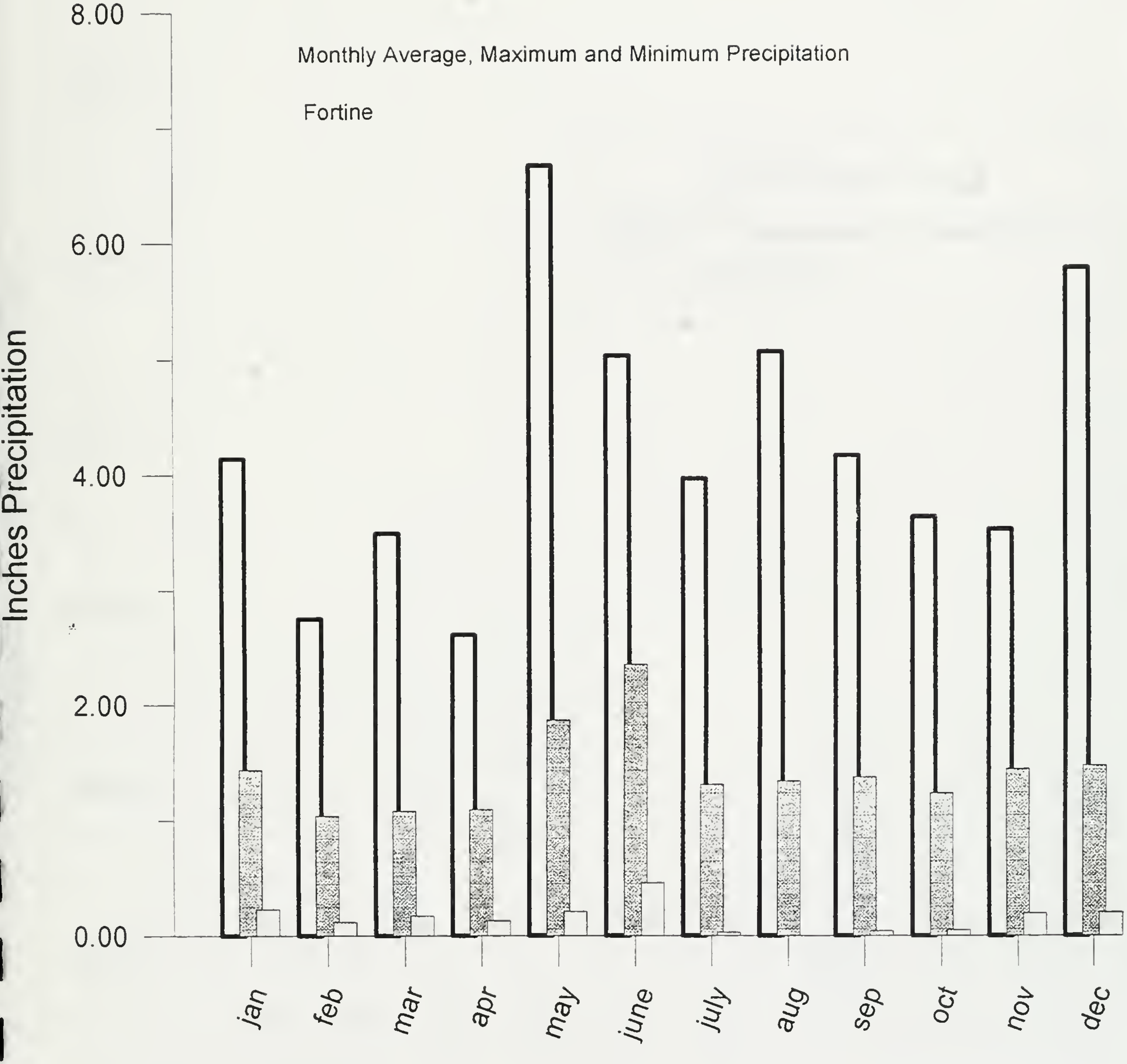
Site does not have known significant water imports.

Mapped area of wetland:	32 acres
Area of contributing drainage basin:	1970 acres
Mapped elevation of wetland surface:	3390 ft
Maximum elevation within drainage basin:	4605 ft
Net relief of contributing basin:	1215 ft

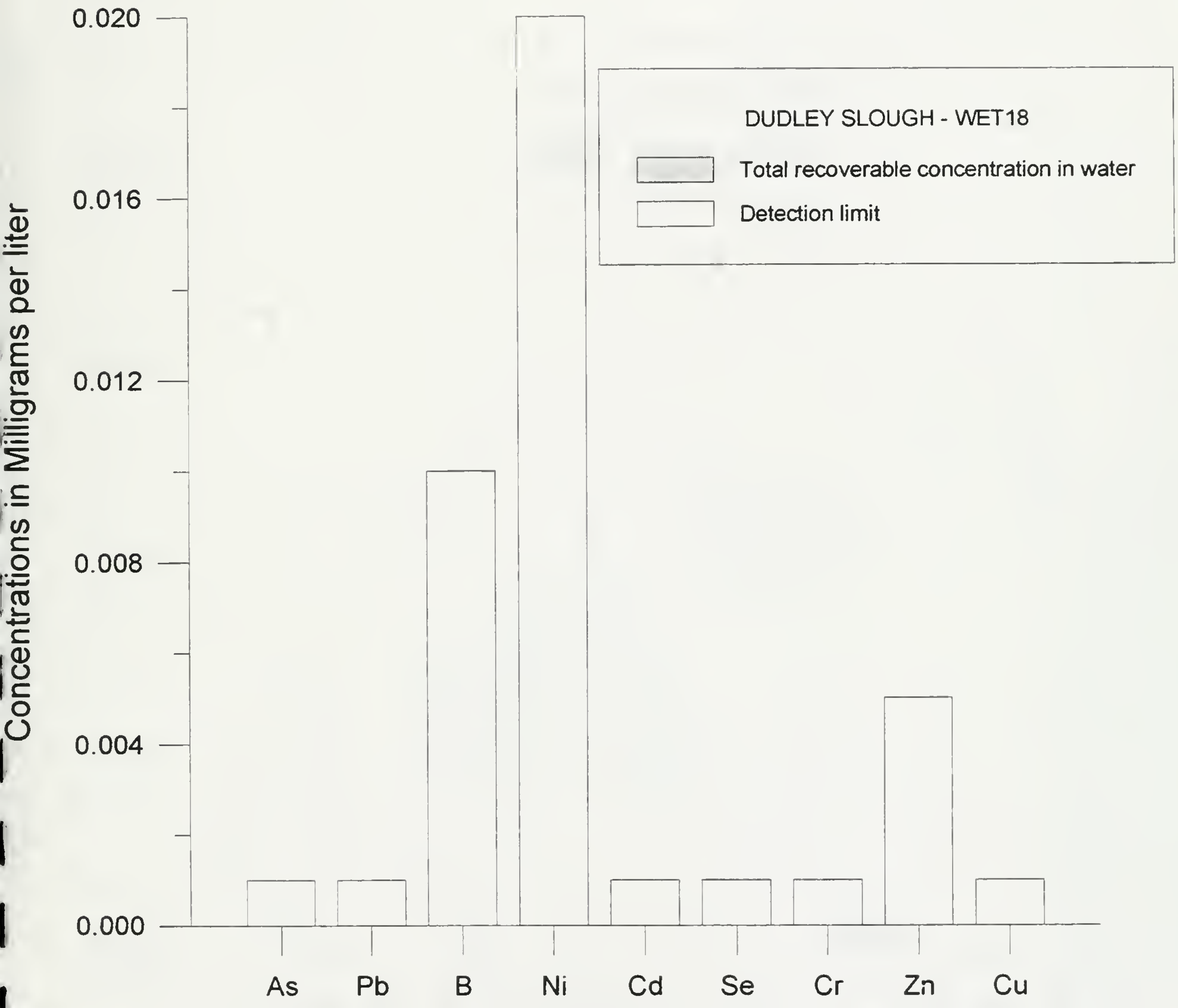
COE Hydrogeomorphic class:	DEPRESSIONAL
Primary surficial geologic unit	112DRFT
Primary bedrock geologic unit	400BELT

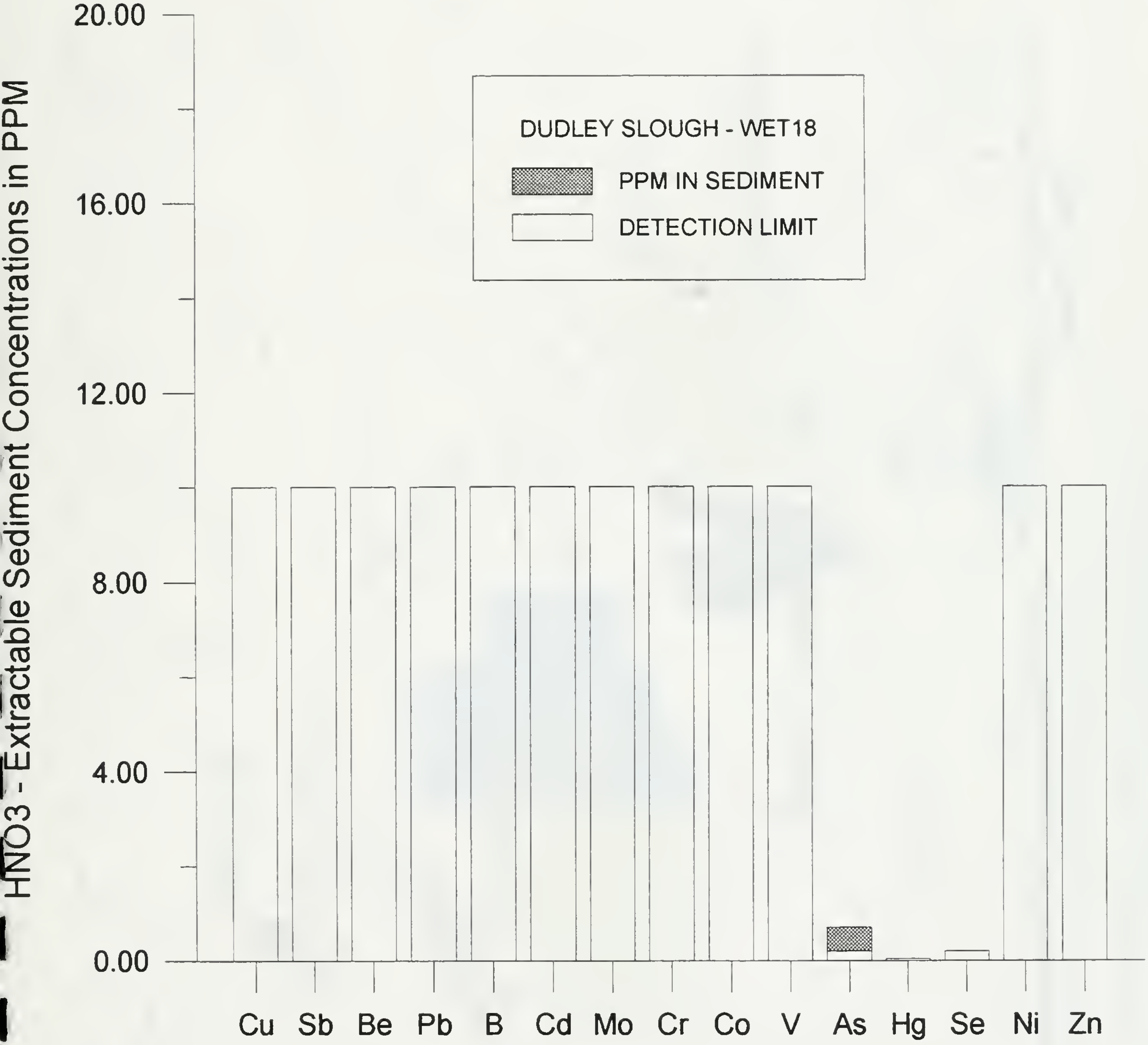


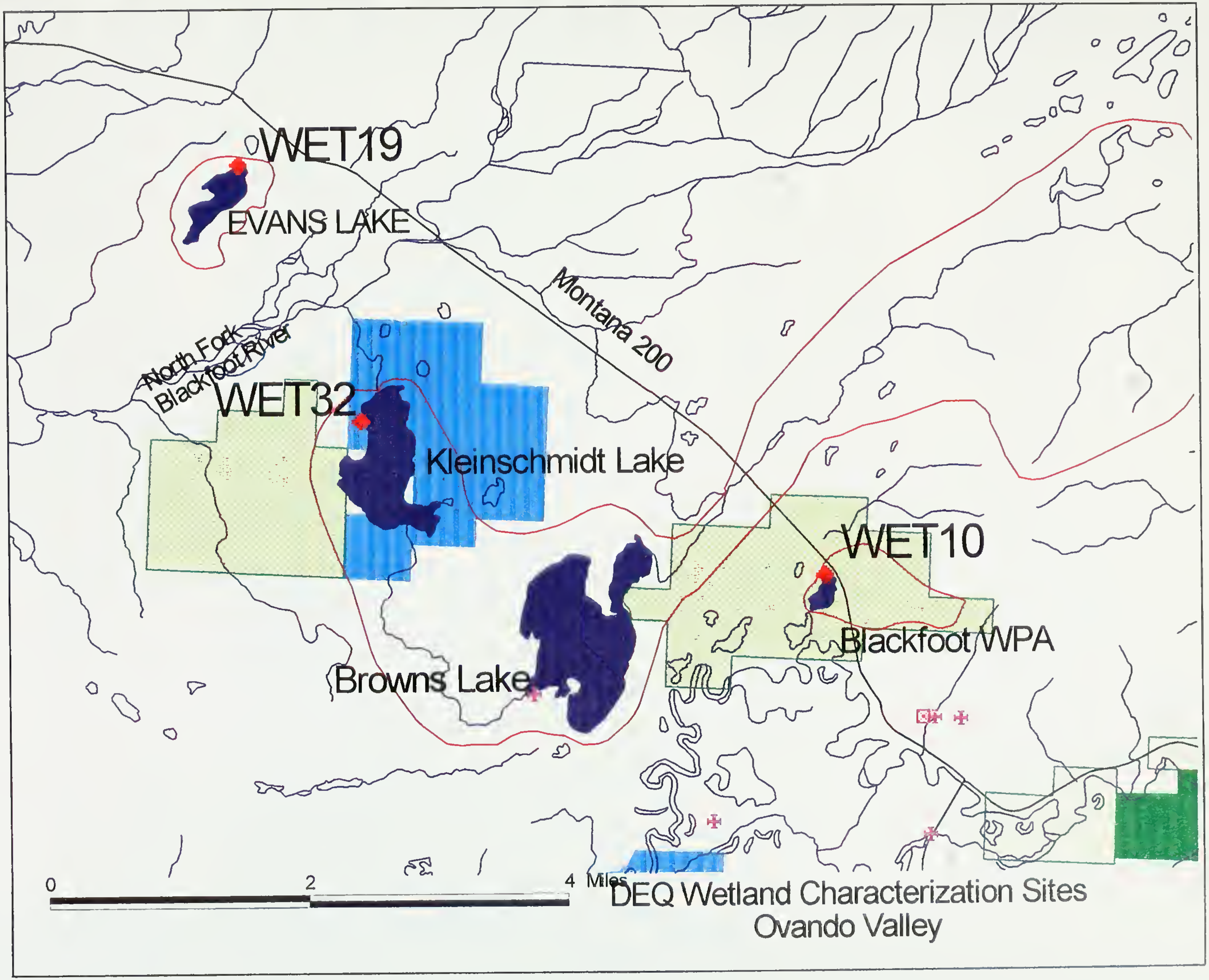
Total Annual Precipitation for Fortine
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
30.00
20.00
10.00
0.00
1910
1920
1930
1940
1950
1960
1970
1980
1990



Monthly Average, Maximum and Minimum Precipitation
Fortine
Inches Precipitation
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec


DUDLEY SLOUGH - WET18
Total recoverable concentration in water
Detection limit
Concentrations in Milligrams per liter
0.020
0.016
0.012
0.008
0.004
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
20.00
16.00
12.00
8.00
4.00
0.00
DUDLEY SLOUGH - WET18
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Sites
Ovando Valley

Wetland: EVANS LAKE Site Code: WET19

7.5 Minute Quad: OVANDO MOUNTAIN

Lat: 47 0 23
Long: 113 4 15

Mean Annual Precipitation in Inches: 17.00

Mean Annual Potential Evaporation (Penman) in Inches: 33.00

'Net Precipitation' in Inches: -16.00

Site does not have a mapped surface inlet.

Site does not have a mapped surface outlet.

Site is not known to be artificially impounded.

Site does not have known significant water imports.

Mapped area of wetland: 74 acres

Area of contributing drainage basin: 280 acres

Mapped elevation of wetland surface: 4190 ft

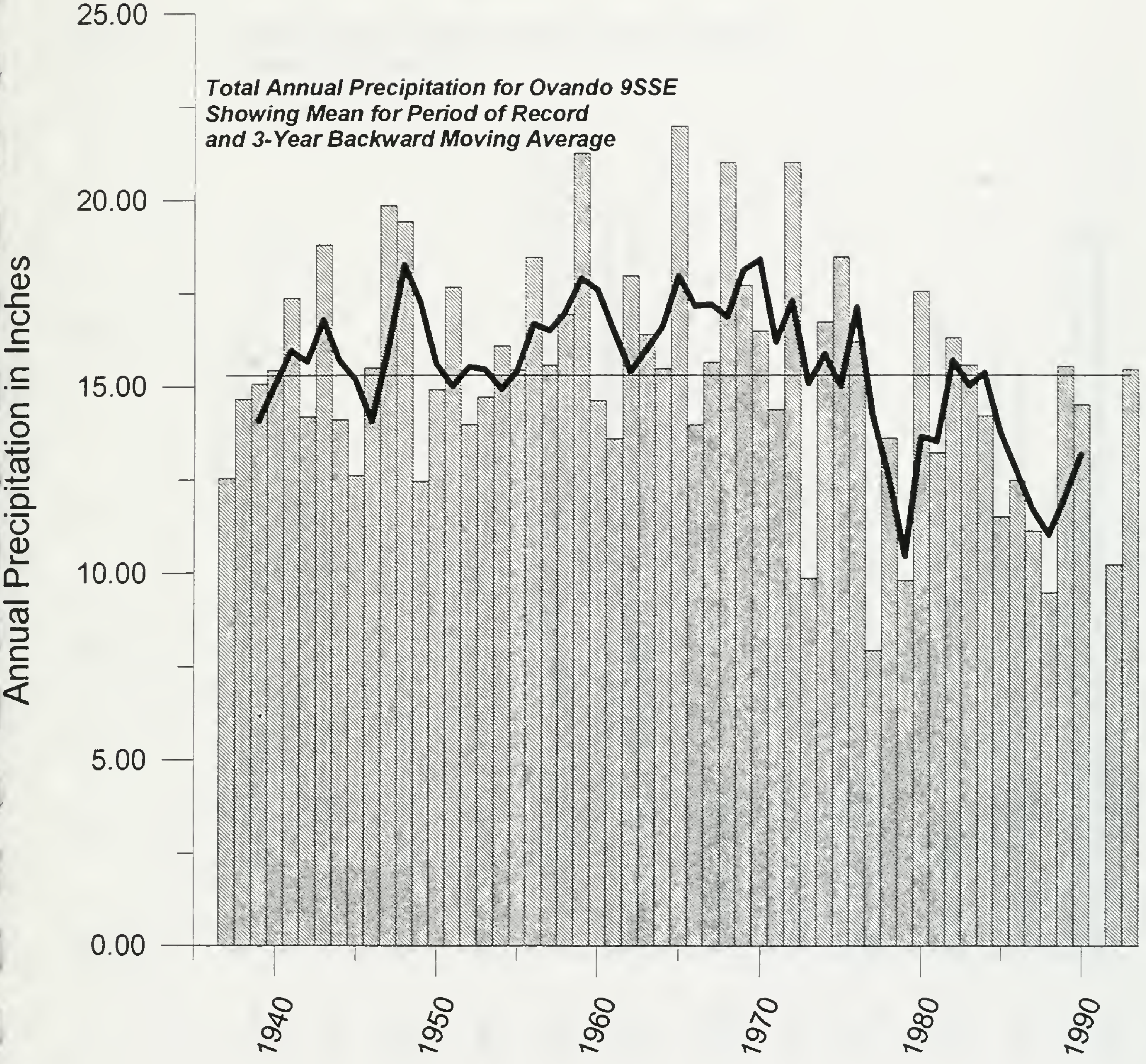
Maximum elevation within drainage basin: 4330 ft

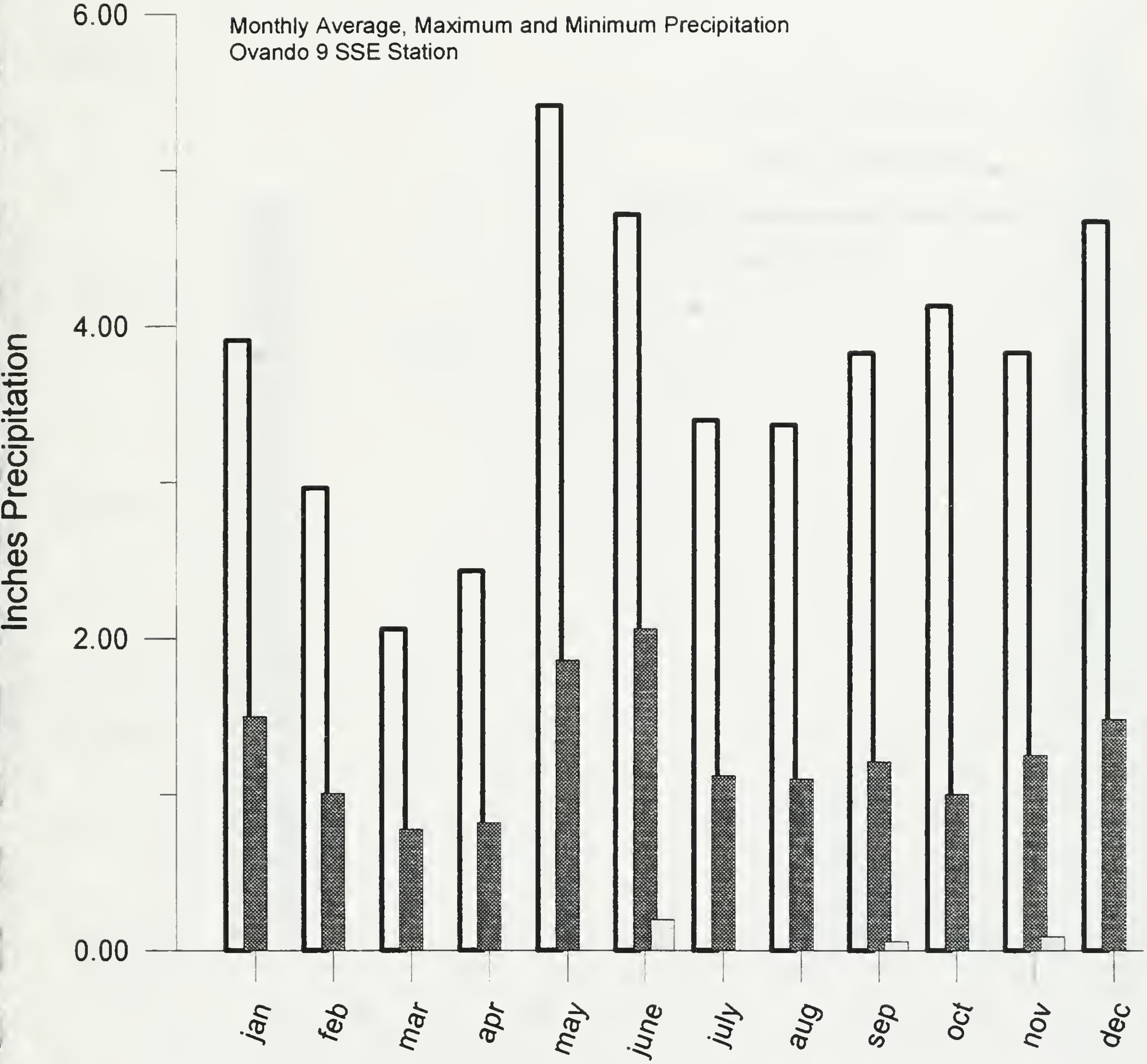
Net relief of contributing basin: 140 ft

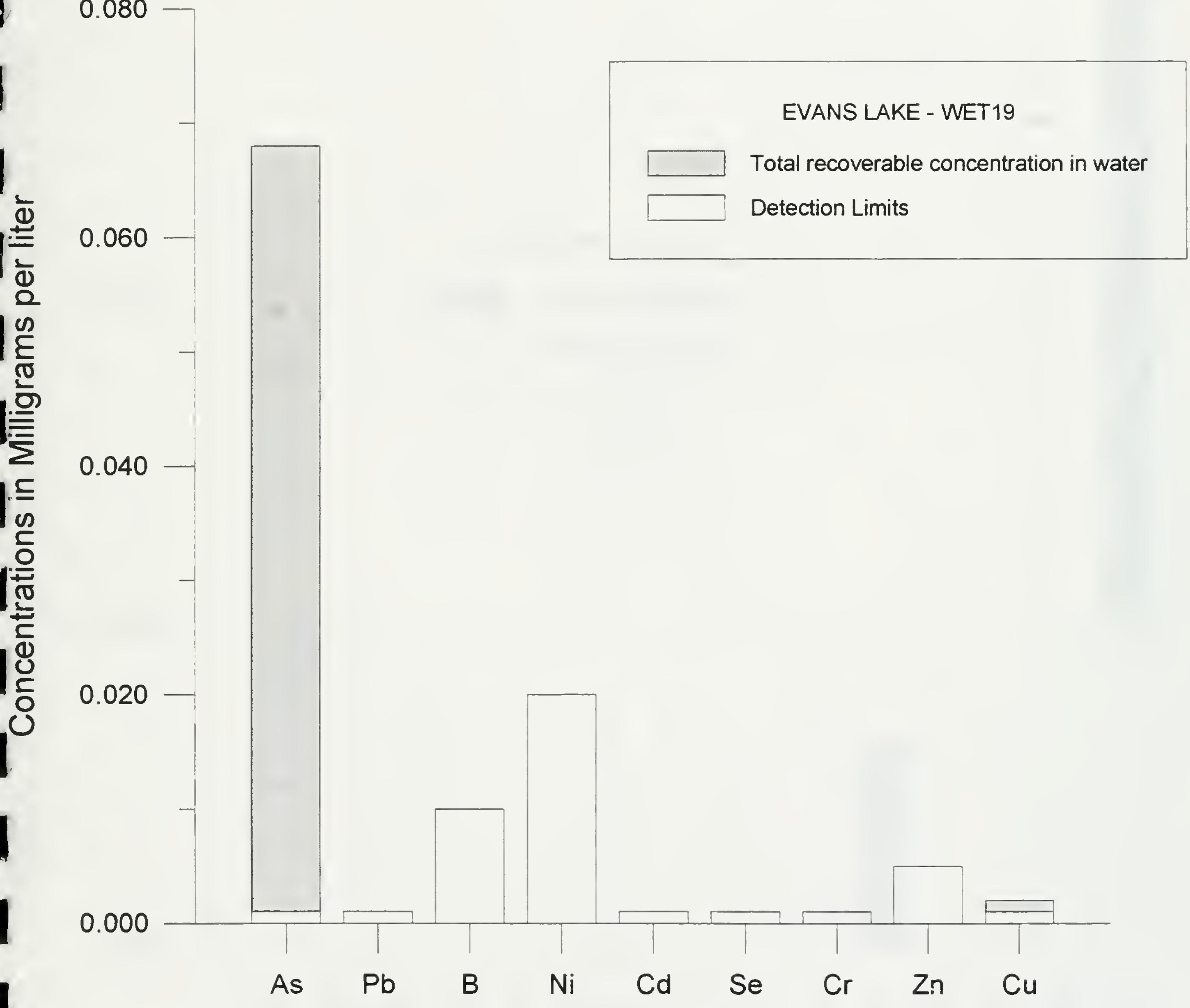
COE Hydrogeomorphic class: FRINGE

Primary surficial geologic unit 112TILL

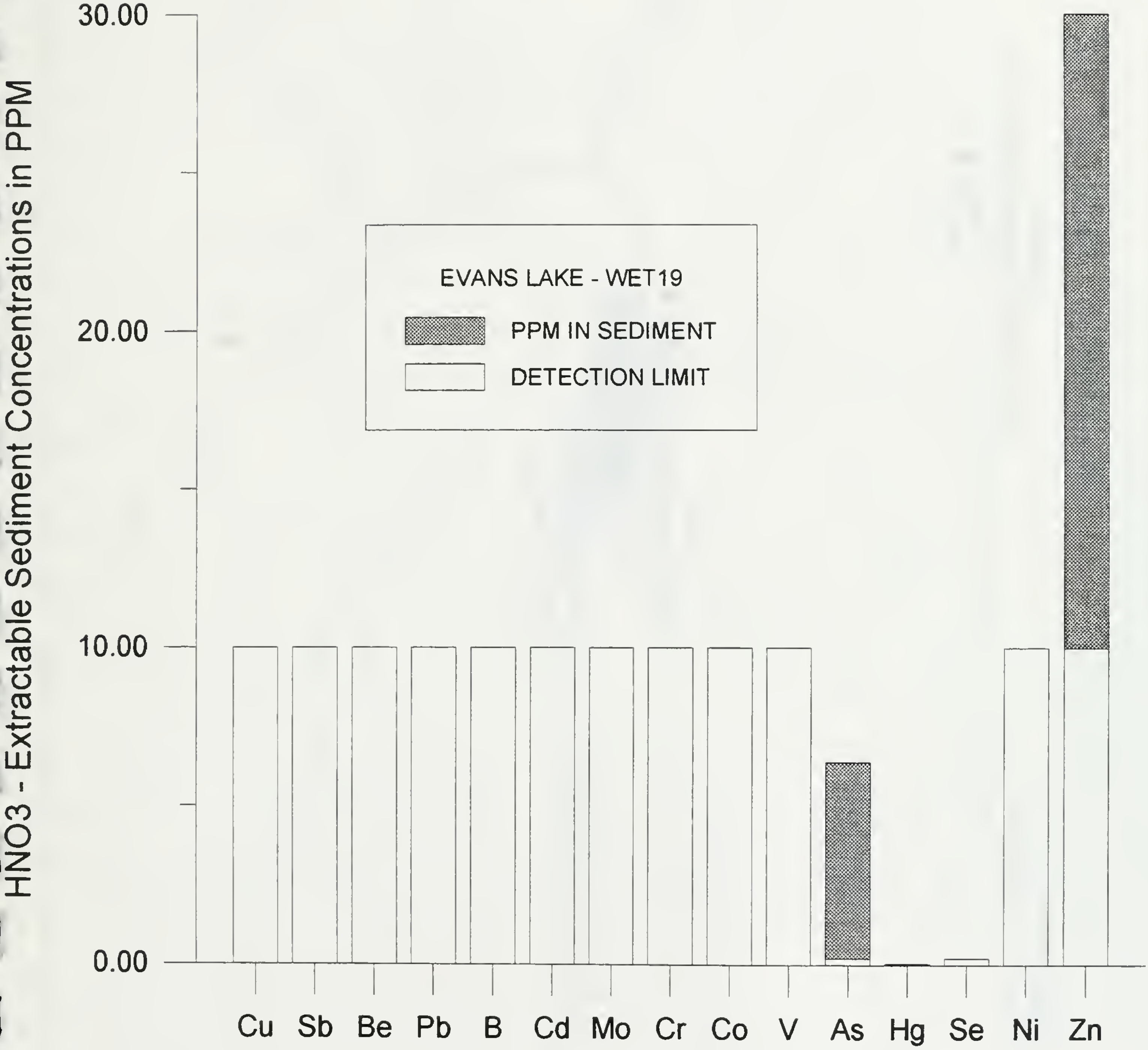
Primary bedrock geologic unit 120SDMS

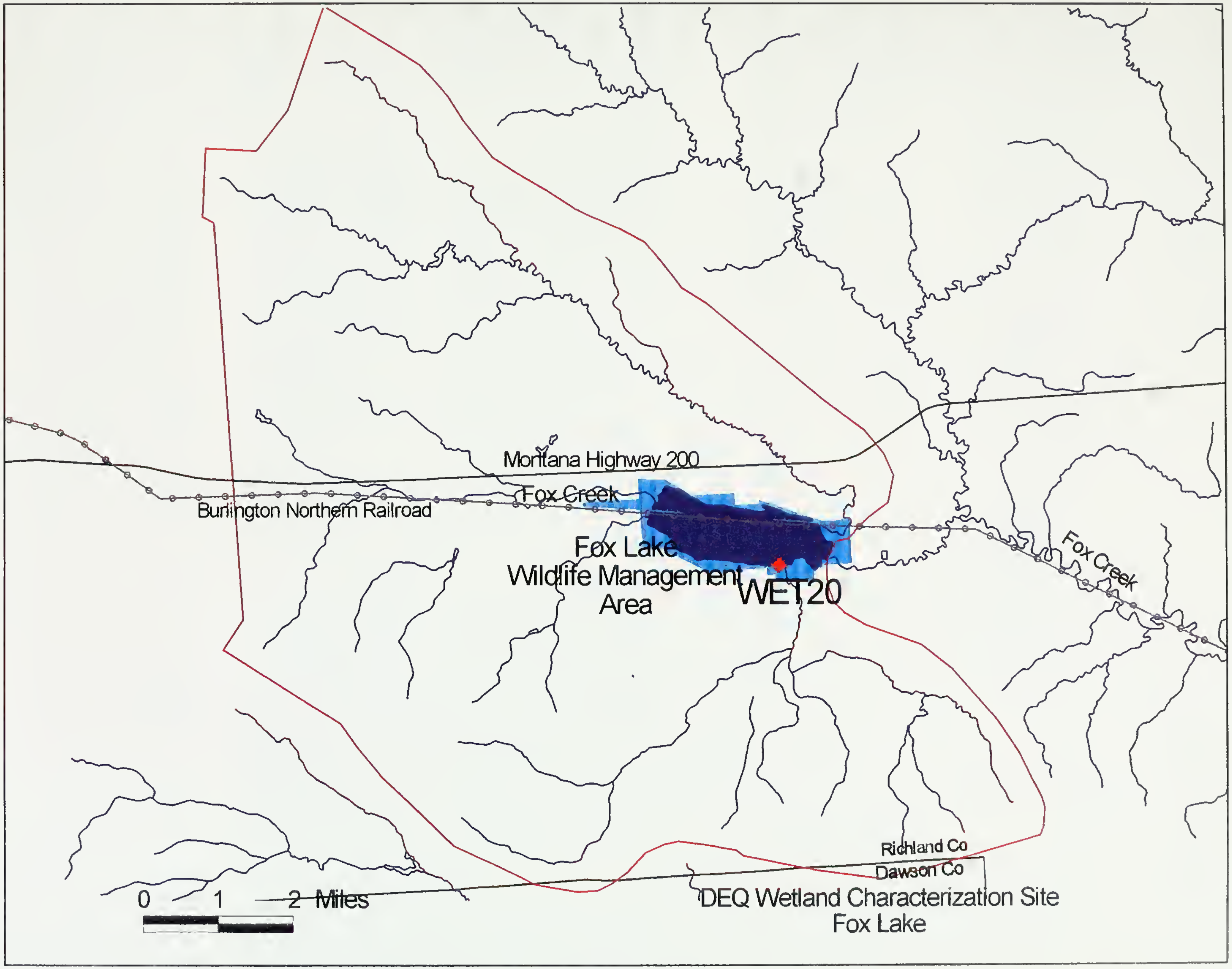

Total Annual Precipitation for Ovando 9SSE
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1940
1950
1960
1970
1980
1990


Monthly Average, Maximum and Minimum Precipitation
Ovando 9 SSE Station
Inches Precipitation
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec



EVANS LAKE - WET19
Total recoverable concentration in water
Detection Limits
Concentrations in Milligrams per liter
0.080
0.060
0.040
0.020
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
30.00
20.00
10.00
0.00
EVANS LAKE - WET19
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn


Montana Highway 200
Fox Creek
Burlington Northern Railroad
Fox Lake
Wildlife Management
Area
WET20
Fox Creek
Richland Co
Dawson Co
0
1
2 Miles
DEQ Wetland Characterization Site
Fox Lake

Wetland: FOX LAKE	Site Code: WET20
7.5 Minute Quad: FOX LAKE	Lat: 47 40 25 Long: 104 38 45

Mean Annual Precipitation in Inches:	13.00
Mean Annual Potential Evaporation (Penman) in Inches:	38.00
'Net Precipitation' in Inches:	-25.00

Site has a mapped surface inlet.

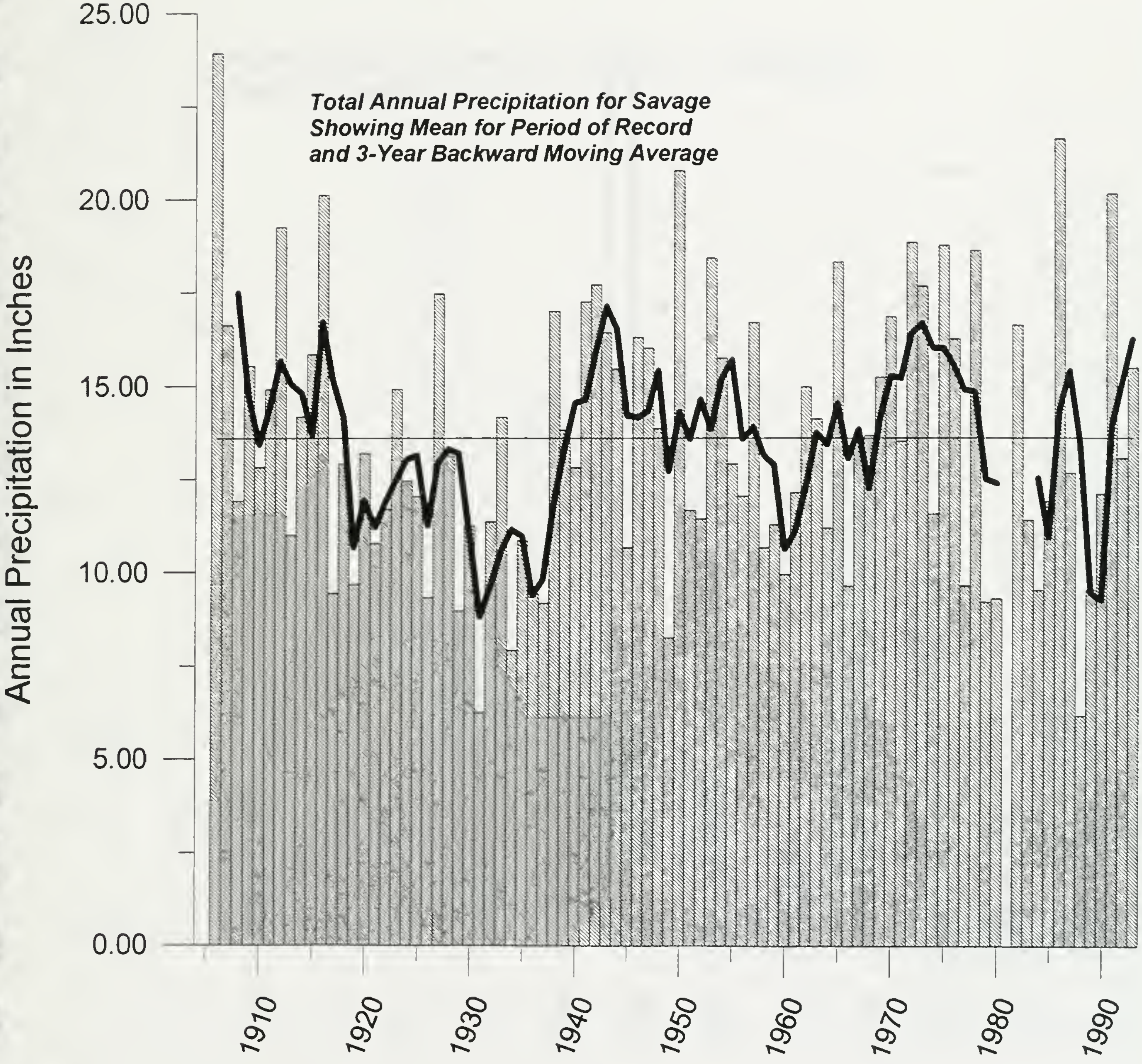
Site has a mapped surface outlet.

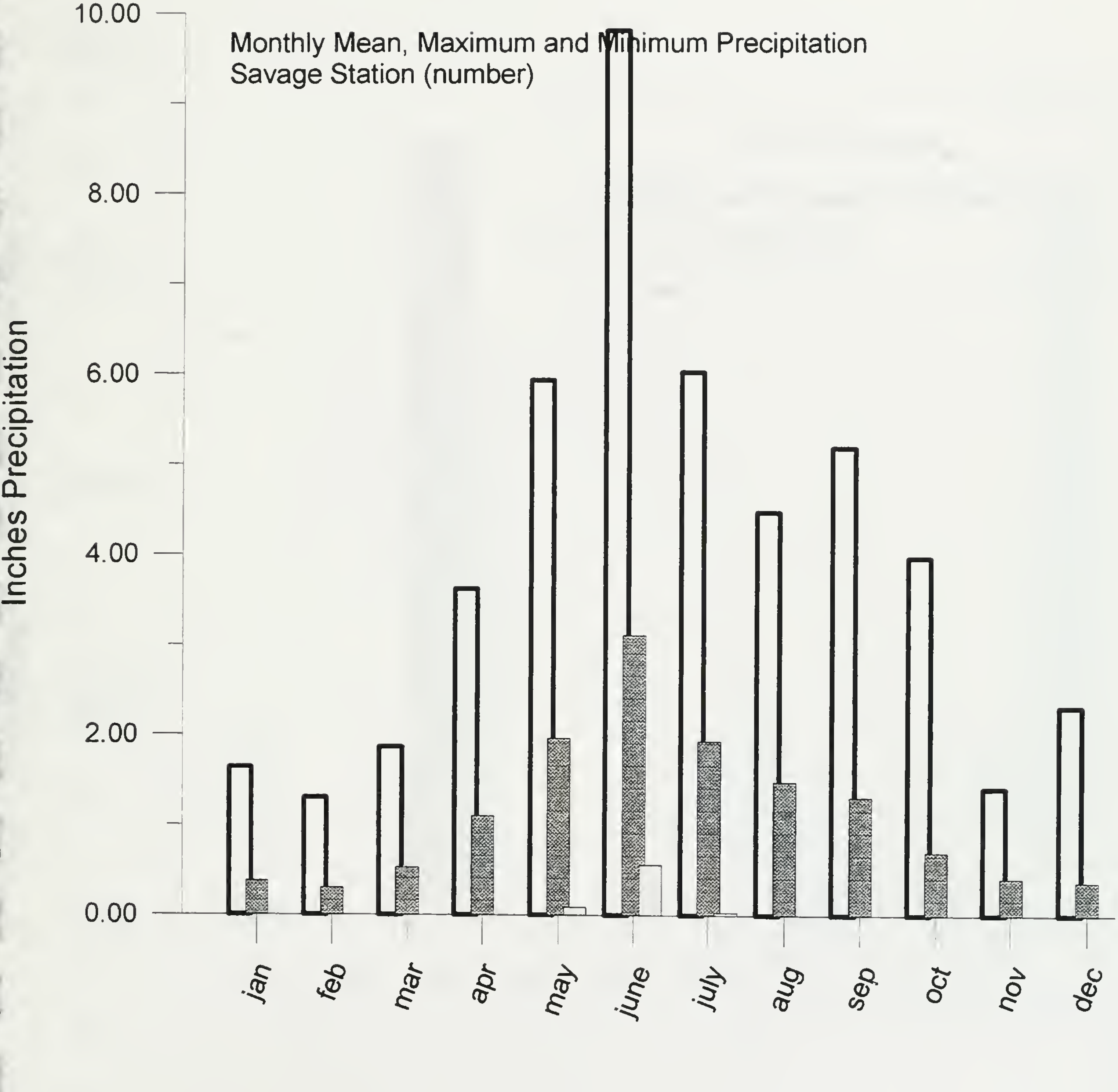
Site is artificially impounded.

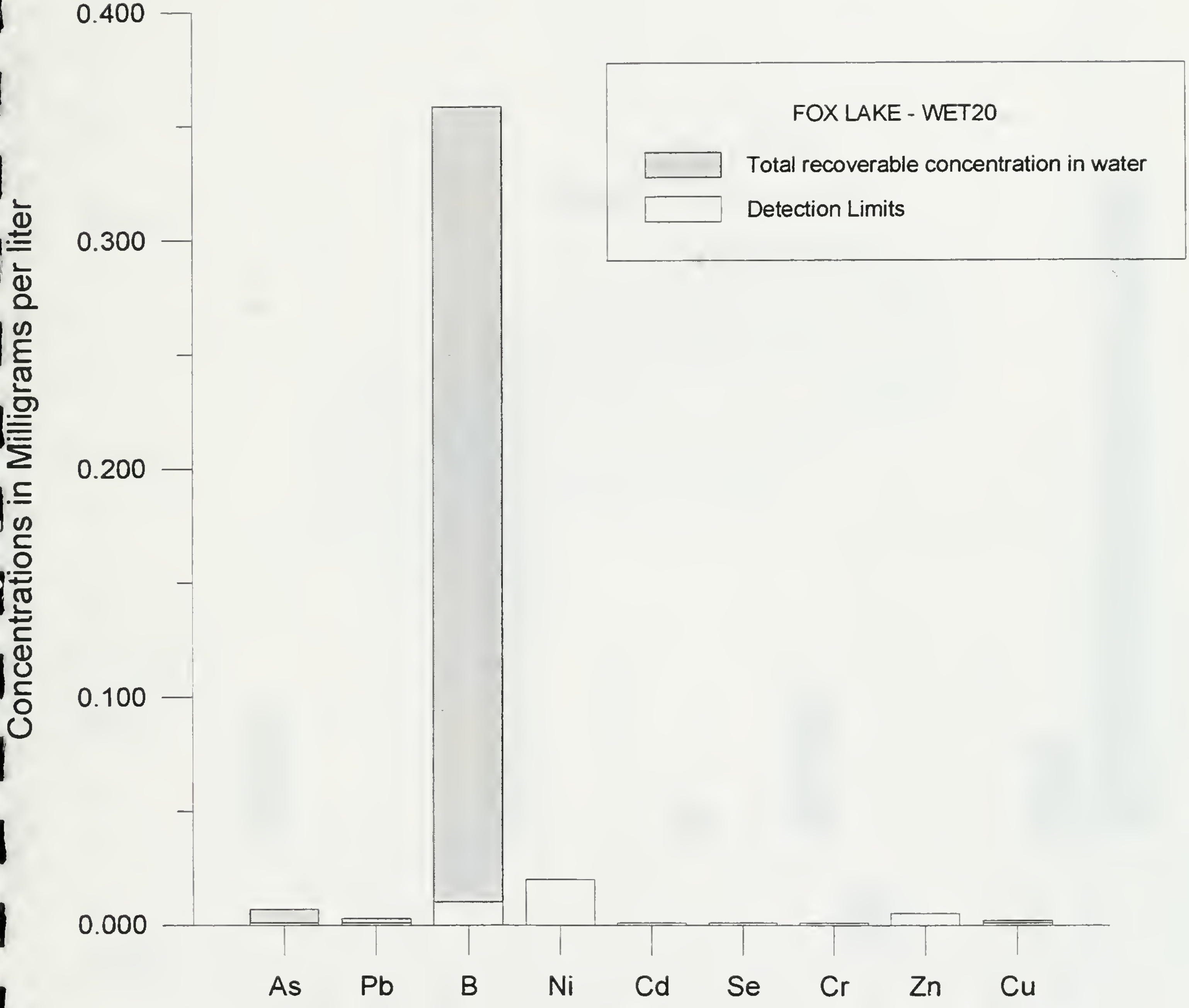
Site does not have known significant water imports.

Mapped area of wetland:	920 acres
Area of contributing drainage basin:	48058 acres
Mapped elevation of wetland surface:	2342 ft
Maximum elevation within drainage basin:	2805 ft
Net relief of contributing basin:	463 ft

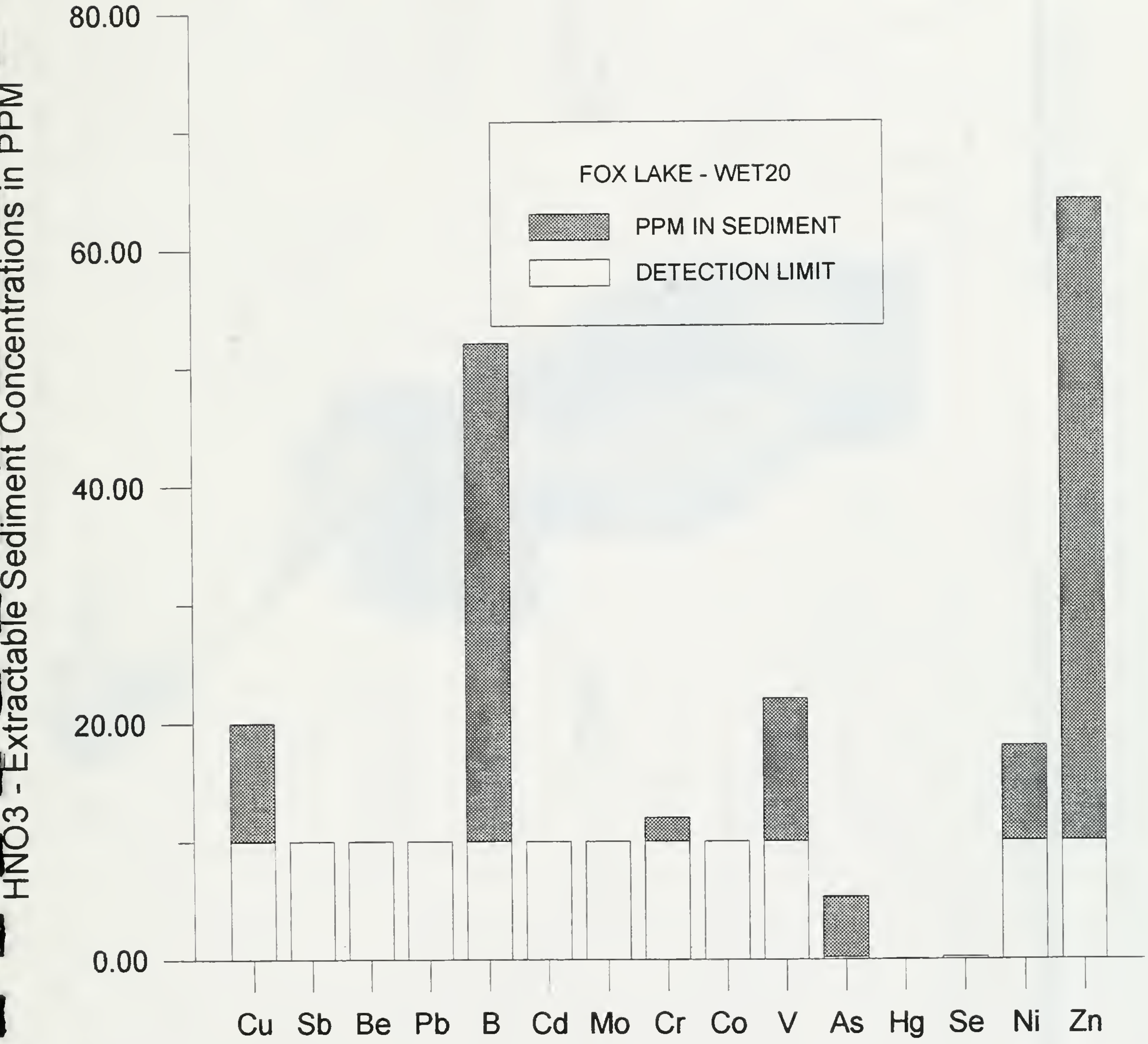
COE Hydrogeomorphic class:	FRINGE
Primary surficial geologic unit	110"LAC"
Primary bedrock geologic unit	125TLCK

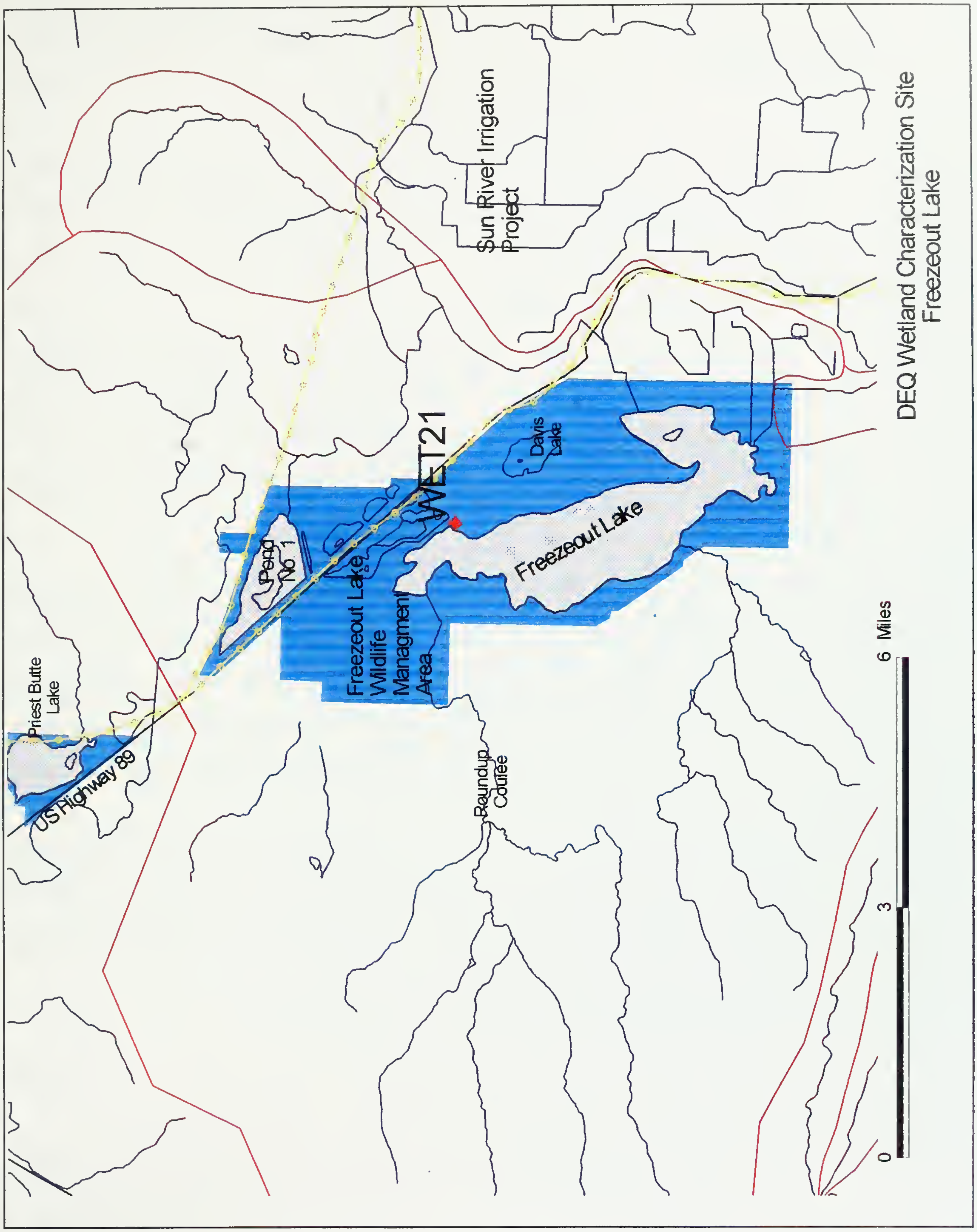

Total Annual Precipitation for Savage
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1910
1920
1930
1940
1950
1960
1970
1980
1990


Monthly Mean, Maximum and Minimum Precipitation
Savage Station (number)
Inches Precipitation
10.00
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec



Concentrations in Milligrams per liter
0.400
0.300
0.200
0.100
0.000
FOX LAKE - WET20
Total recoverable concentration in water
Detection Limits
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
80.00
60.00
40.00
20.00
0.00
FOX LAKE - WET20
▨ PPM IN SEDIMENT
☐ DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Freezeout Lake

Wetland: FREEZOUT LAKE

Site Code: WET21

7.5 Minute Quad: FREEZEOUT LAKE

Lat: 47 41 0
Long: 112 2 50

Mean Annual Precipitation in Inches: 13.00

Mean Annual Potential Evaporation (Penman) in Inches: 40.00

'Net Precipitation' in Inches: -27.00

Site has a mapped surface inlet.

Site has a mapped surface outlet.

Site is artificially impounded.

Site has significant water imports.

Mapped area of wetland: 2589 acres

Area of contributing drainage basin: 67400 acres

Mapped elevation of wetland surface: 3765 ft

Maximum elevation within drainage basin: 4650 ft

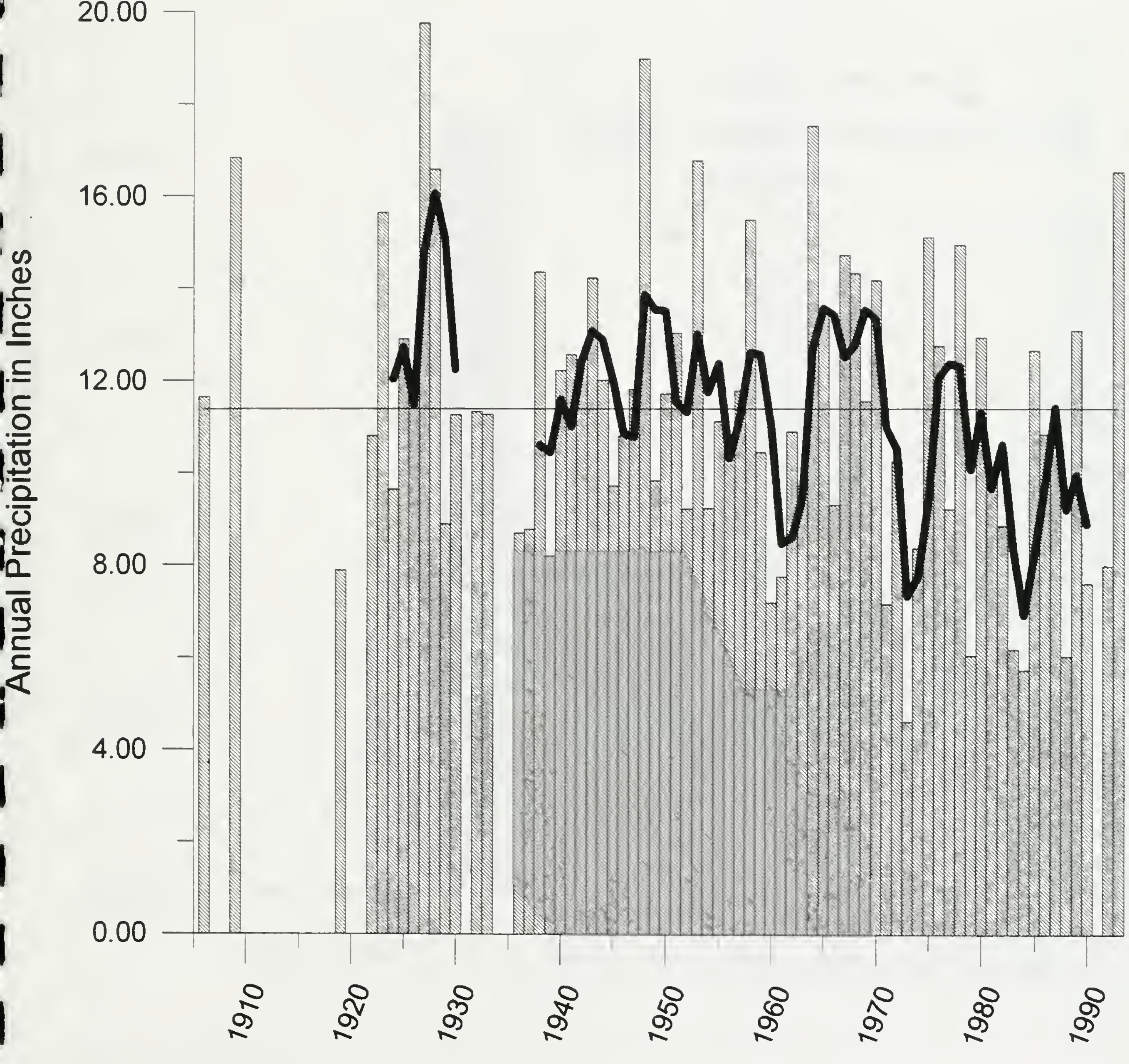
Net relief of contributing basin: 885 ft

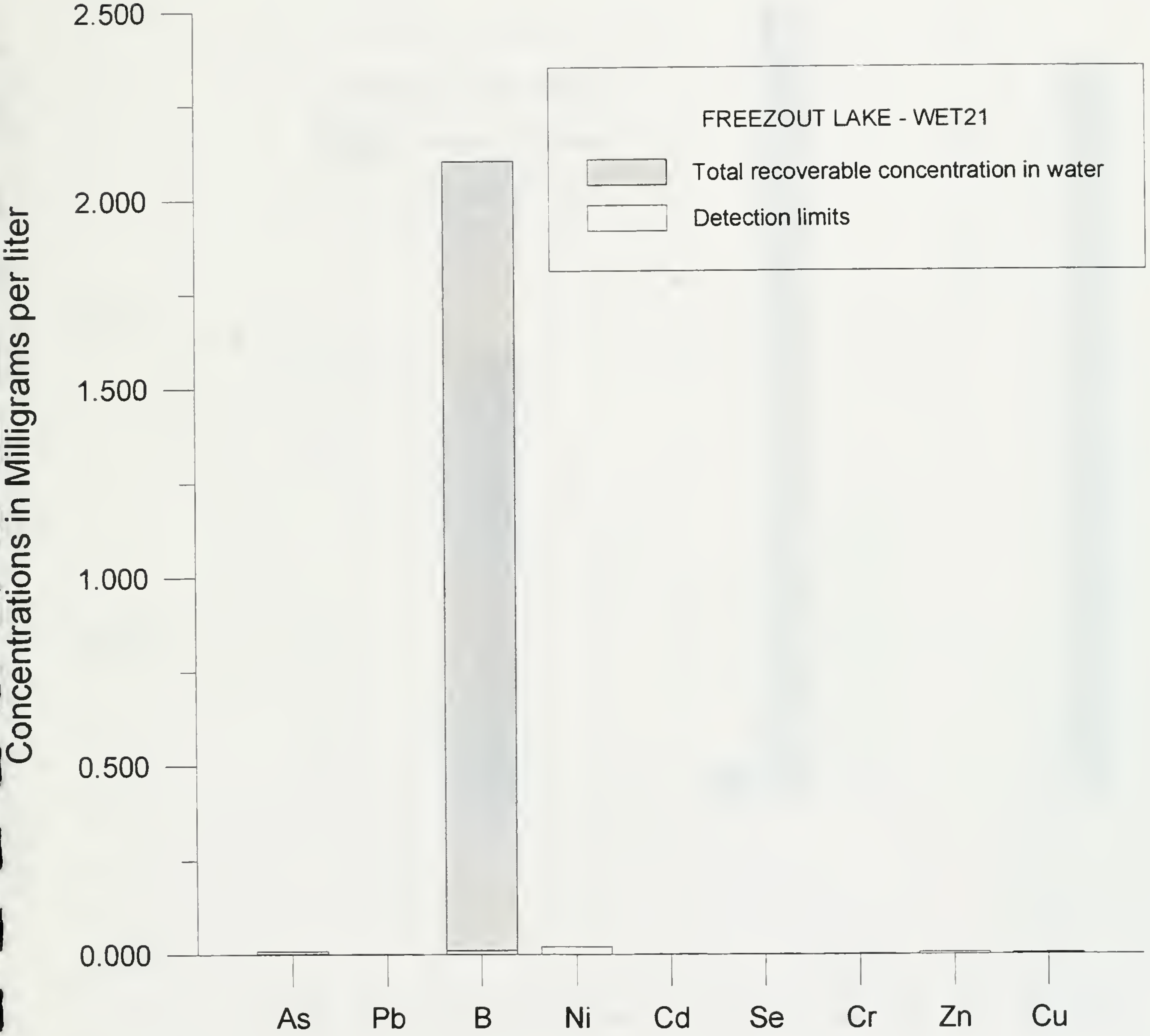
COE Hydrogeomorphic class: FRINGE

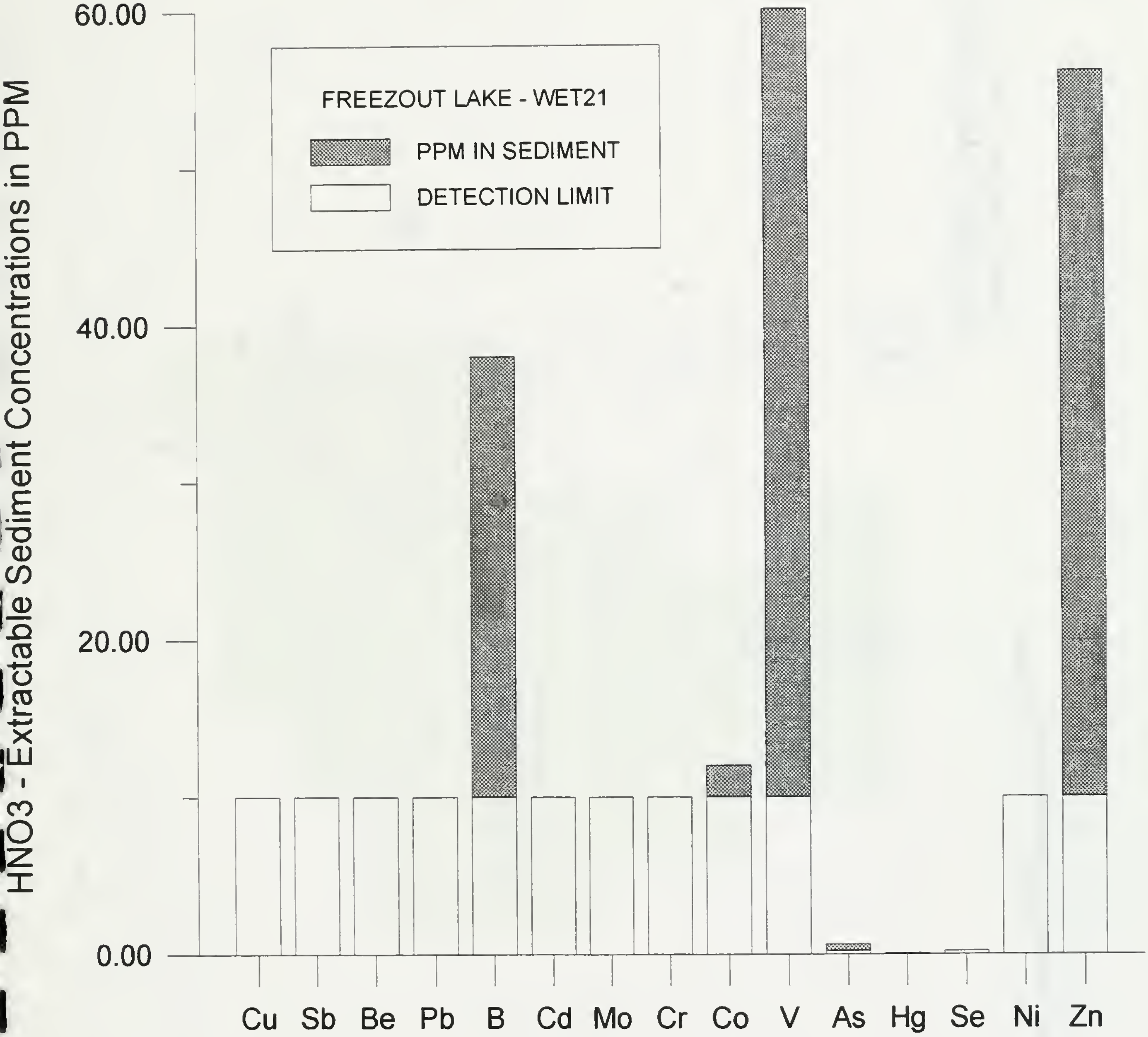
Primary surficial geologic unit 112GLCC

Primary bedrock geologic unit 210CRCS

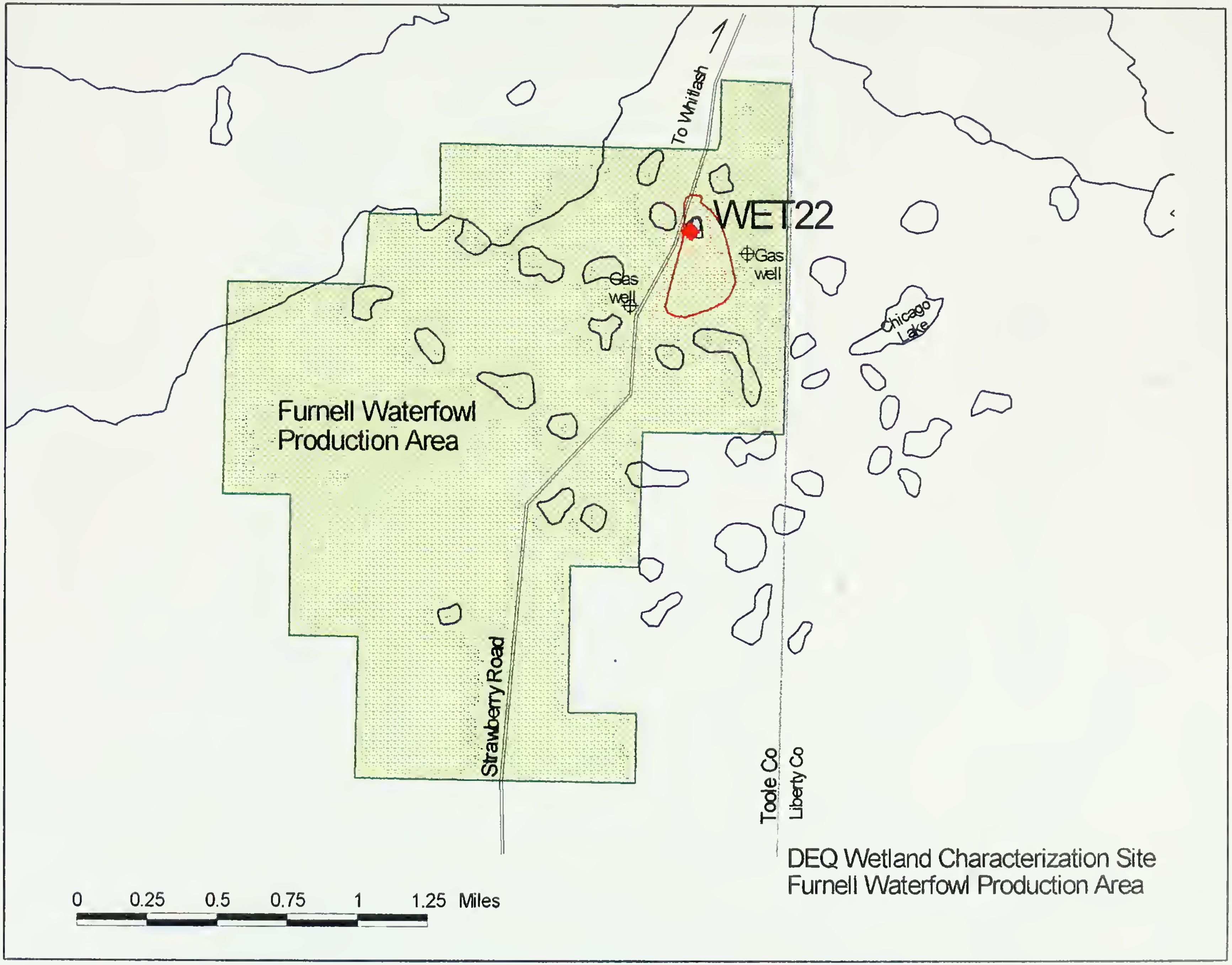
Total Annual Precipitation for Choteau Showing Mean for Period of Record and 3-Year Backward Moving Average




Concentrations in Milligrams per liter
2.500
2.000
1.500
1.000
0.500
0.000
FREEZOUT LAKE - WET21
Total recoverable concentration in water
Detection limits
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu



HNO3 - Extractable Sediment Concentrations in PPM
60.00
40.00
20.00
0.00
FREEZOUT LAKE - WET21
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Furnell Waterfowl Production Area

Wetland: FURNELL WPA

Site Code: WET22

7.5 Minute Quad: GRASSY BUTTE

Lat: 48 52 12
Long: 111 16 50

Mean Annual Precipitation in Inches: 17.00

Mean Annual Potential Evaporation (Penman) in Inches: 36.00

'Net Precipitation' in Inches: -19.00

Site does not have a mapped surface inlet.

Site does not have a mapped surface outlet.

Site is not known to be artificially impounded.

Site does not have known significant water imports.

Mapped area of wetland: 2 acres

Area of contributing drainage basin: 44 acres

Mapped elevation of wetland surface: 4135 ft

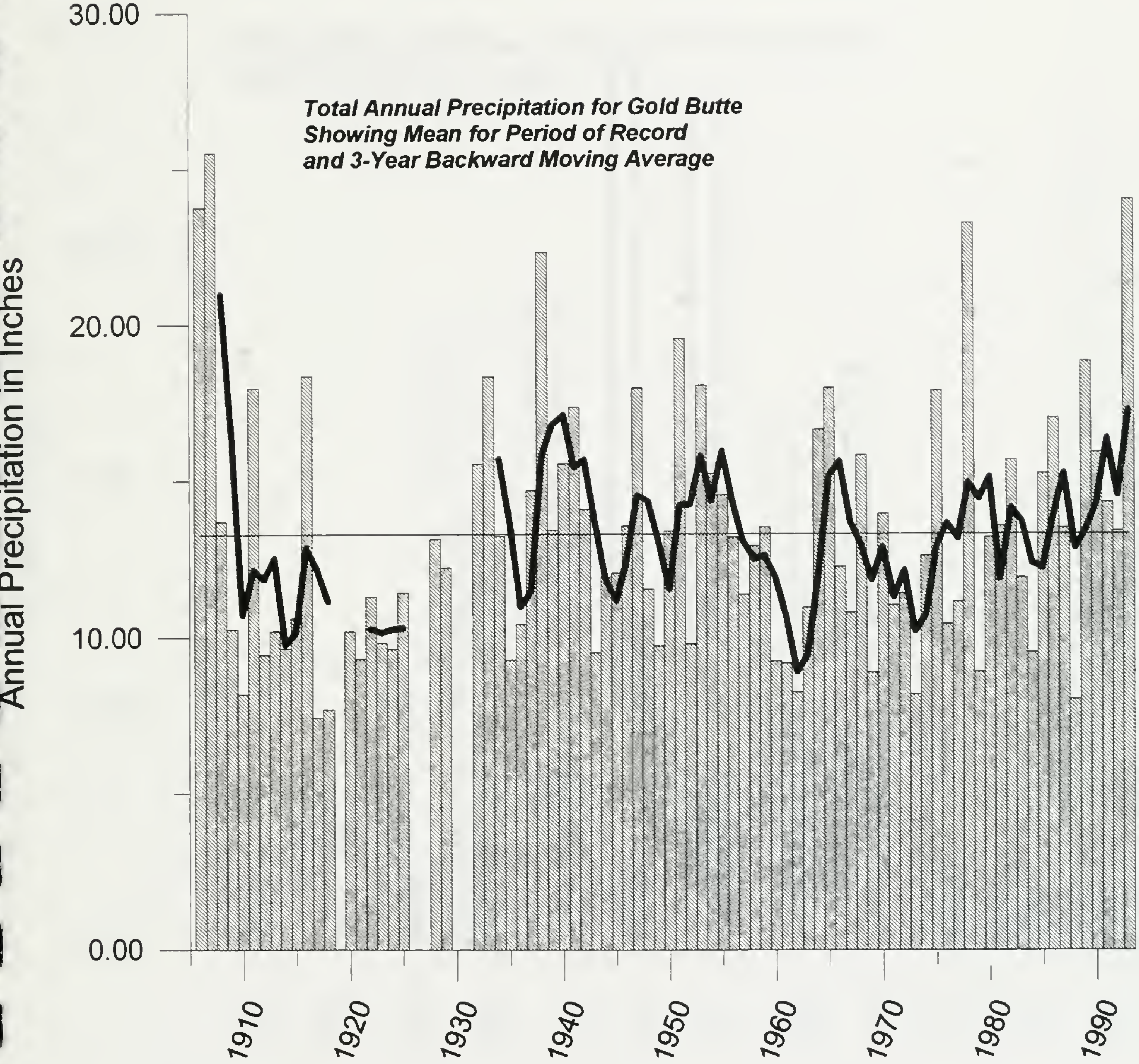
Maximum elevation within drainage basin: 4221 ft

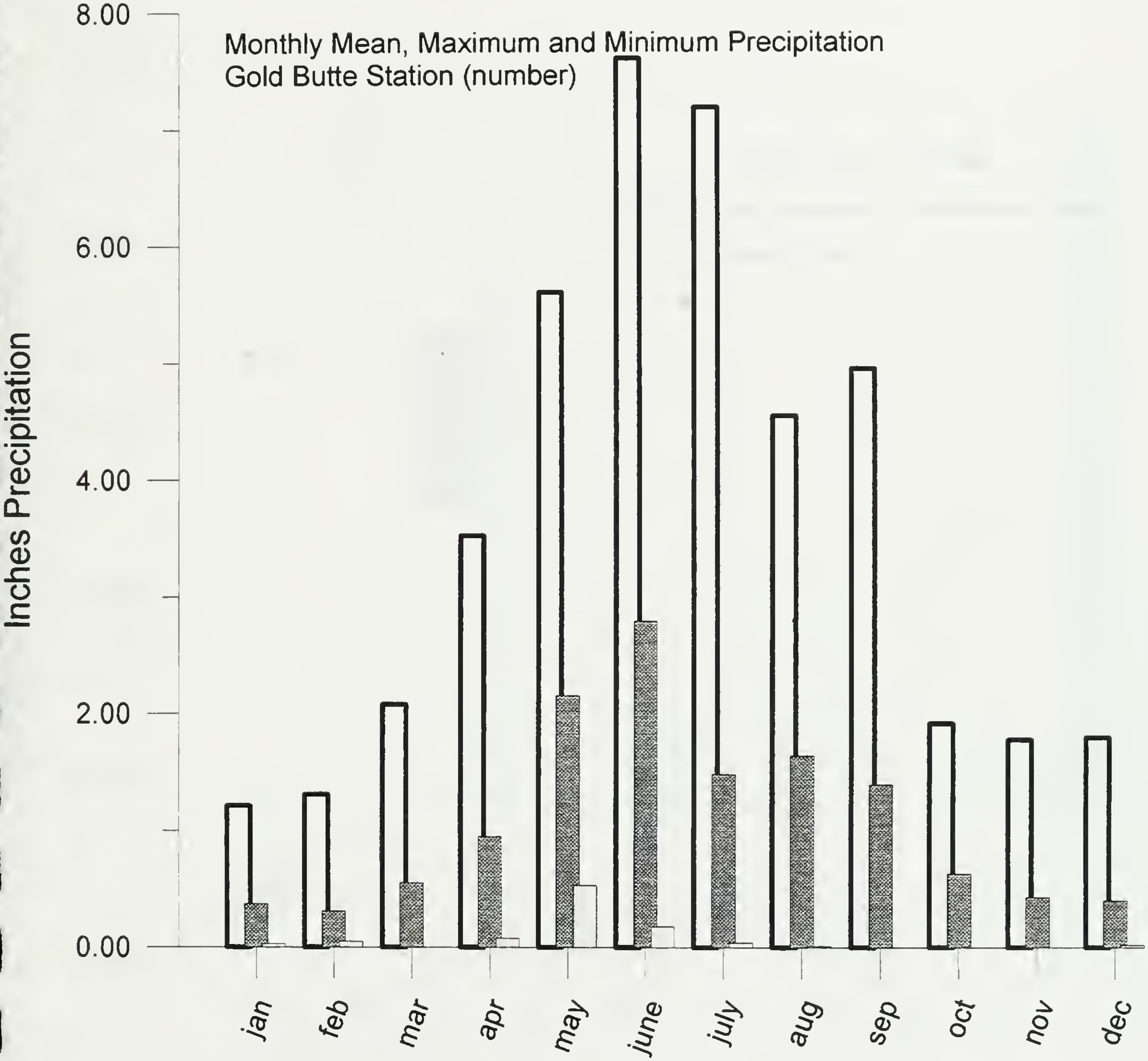
Net relief of contributing basin: 86 ft

COE Hydrogeomorphic class: DEPRESSIONAL

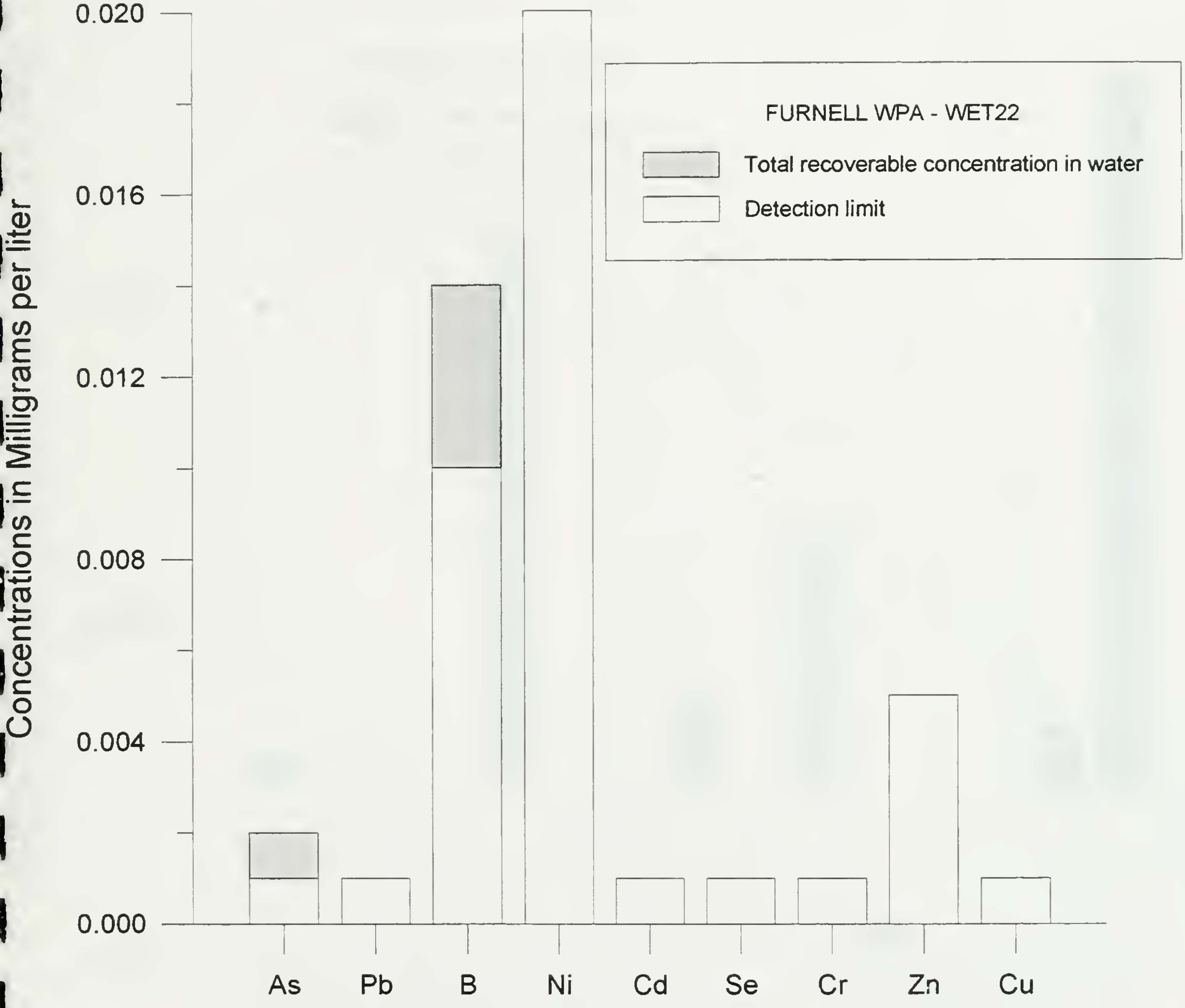
Primary surficial geologic unit 112TILL

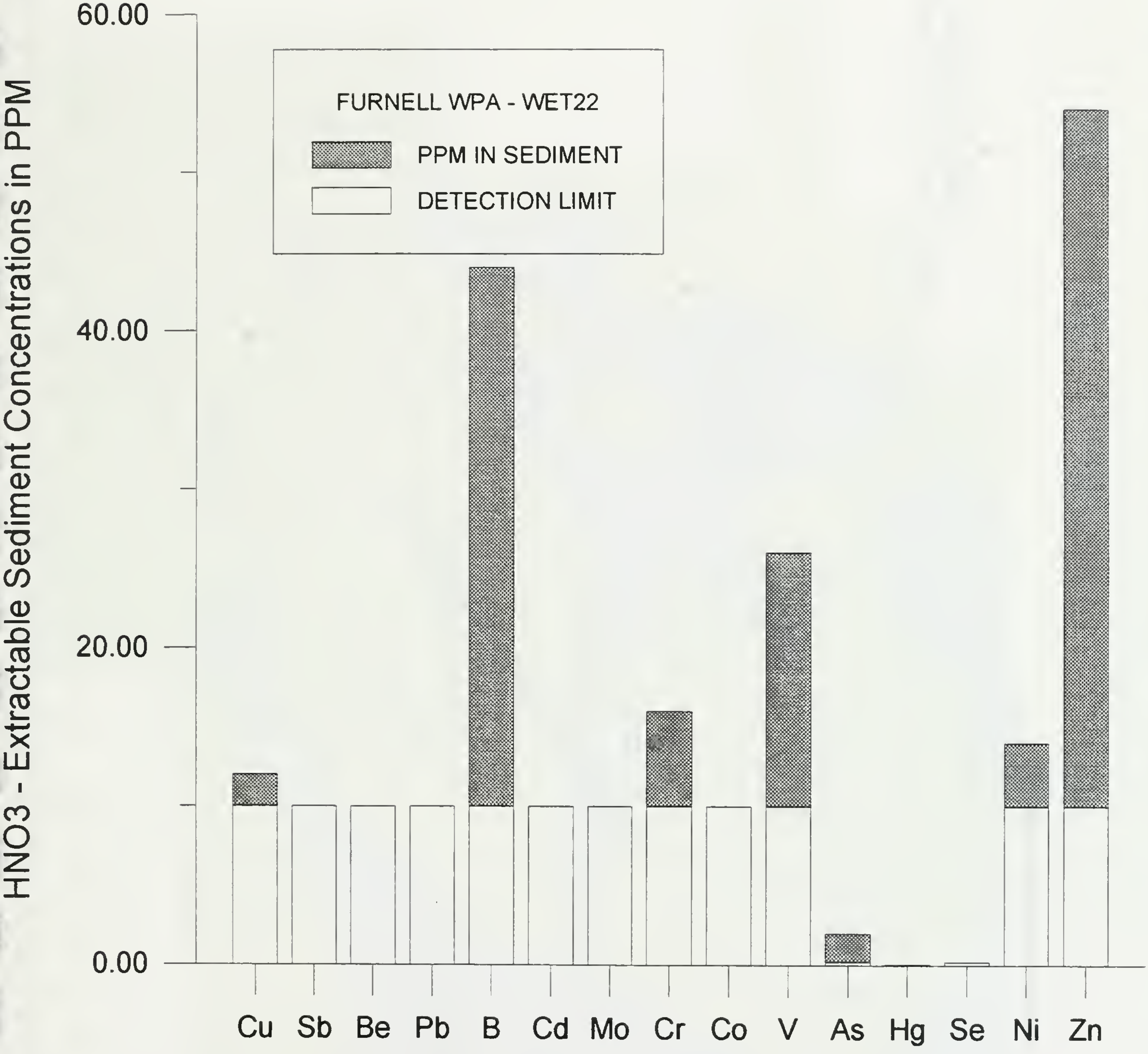
Primary bedrock geologic unit 211CLGG

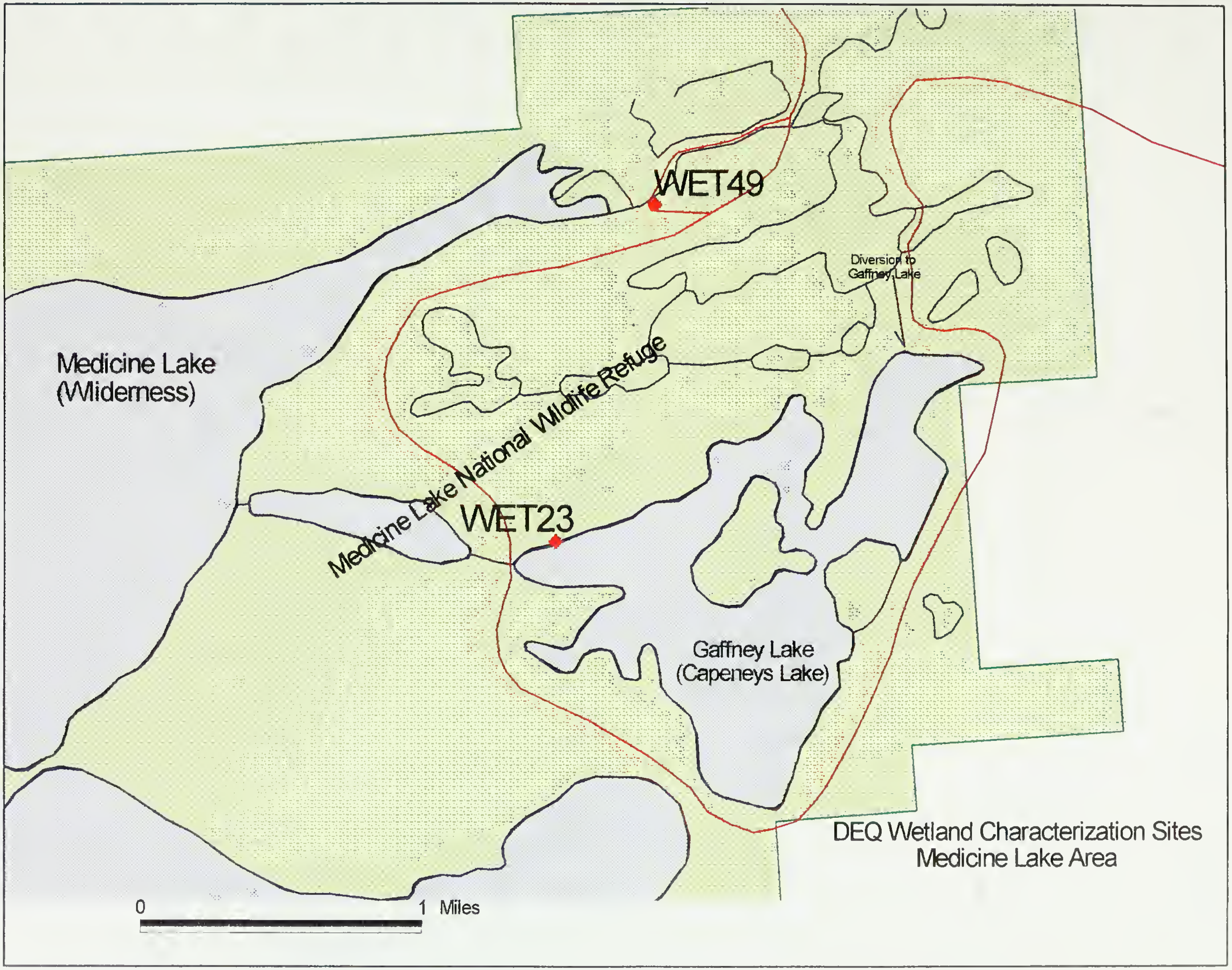

Total Annual Precipitation for Gold Butte
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
30.00
20.00
10.00
0.00
1910
1920
1930
1940
1950
1960
1970
1980
1990



Monthly Mean, Maximum and Minimum Precipitation
Gold Butte Station (number)
Inches Precipitation
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec


FURNELL WPA - WET22
Total recoverable concentration in water
Detection limit
Concentrations in Milligrams per liter
0.020
0.016
0.012
0.008
0.004
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
60.00
40.00
20.00
0.00
FURNELL WPA - WET22
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Sites
Medicine Lake Area

Wetland: GAFFNEY LAKE

Site Code: WET23

7.5 Minute Quad: CAPENEY'S LAKE

Lat: 48 28 40
Long: 104 20 0

Mean Annual Precipitation in Inches: 13.00

Mean Annual Potential Evaporation (Penman) in Inches: 37.00

'Net Precipitation' in Inches: -24.00

Site has a mapped surface inlet.

Site has a mapped surface outlet.

Site is artificially impounded.

Site does not have known significant water imports.

Mapped area of wetland: 650 acres

Area of contributing drainage basin: 292110 acres

Mapped elevation of wetland surface: 1937 ft

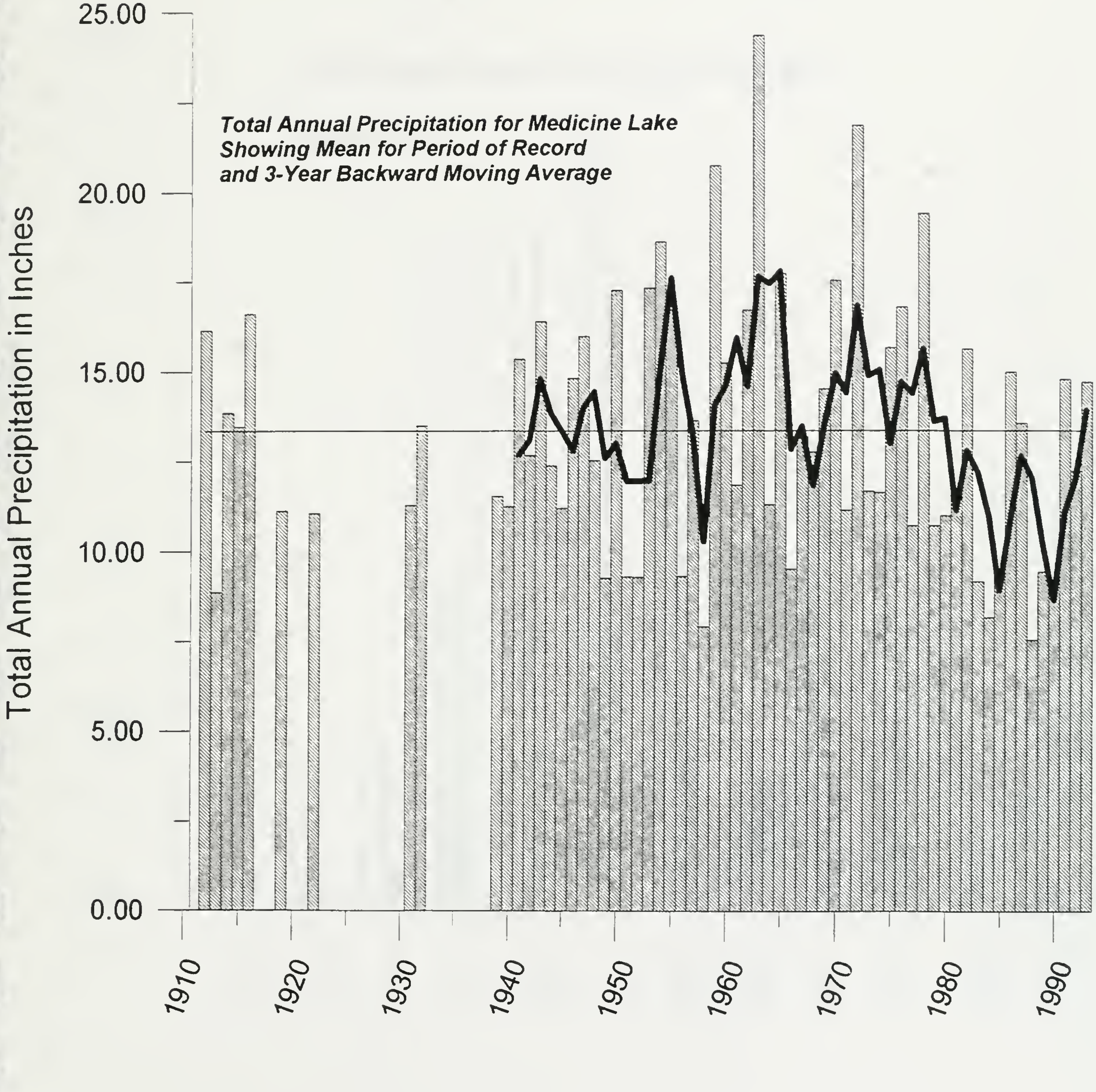
Maximum elevation within drainage basin: 2025 ft

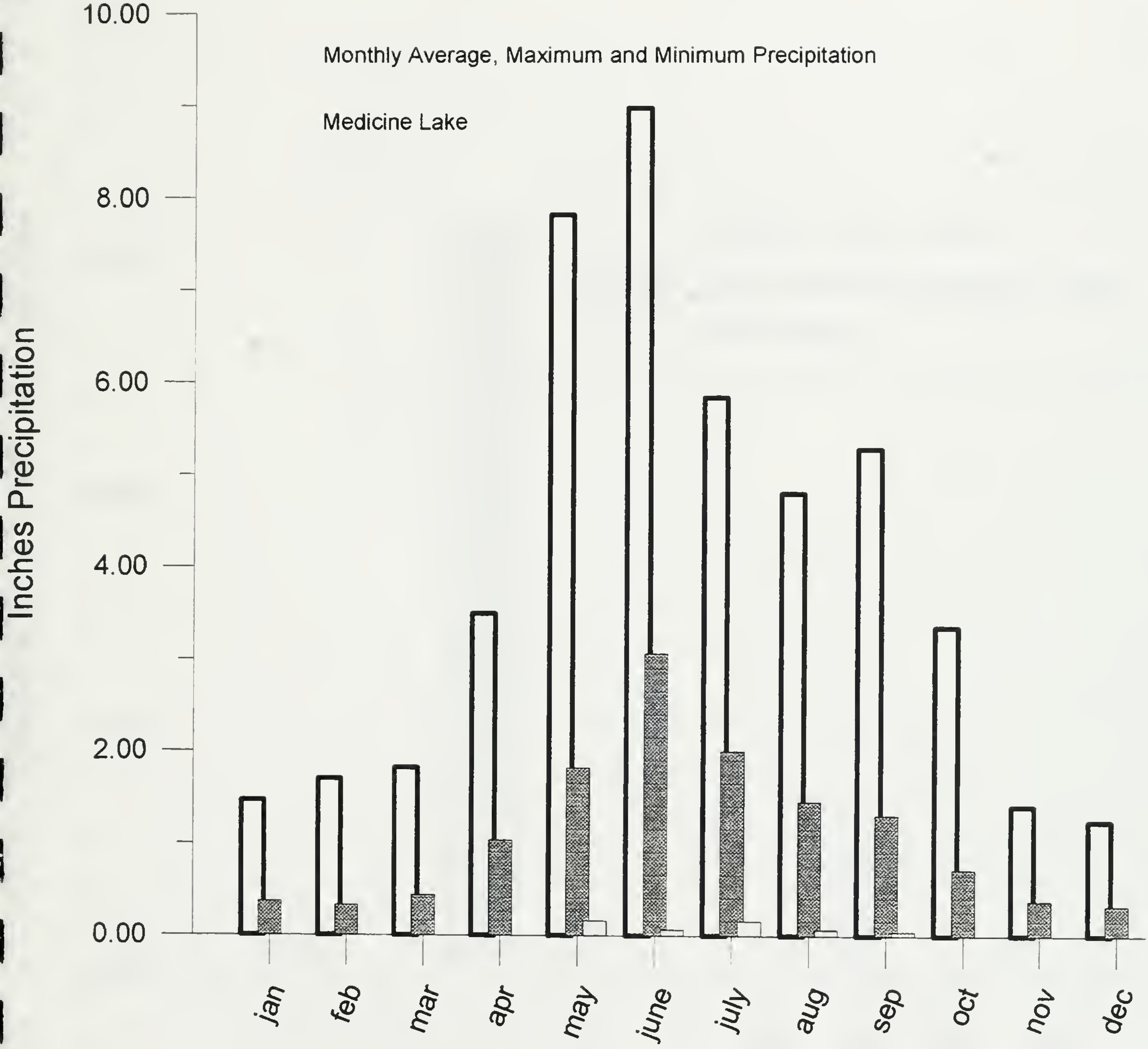
Net relief of contributing basin: 88 ft

COE Hydrogeomorphic class: FRINGE

Primary surficial geologic unit 112OTSH

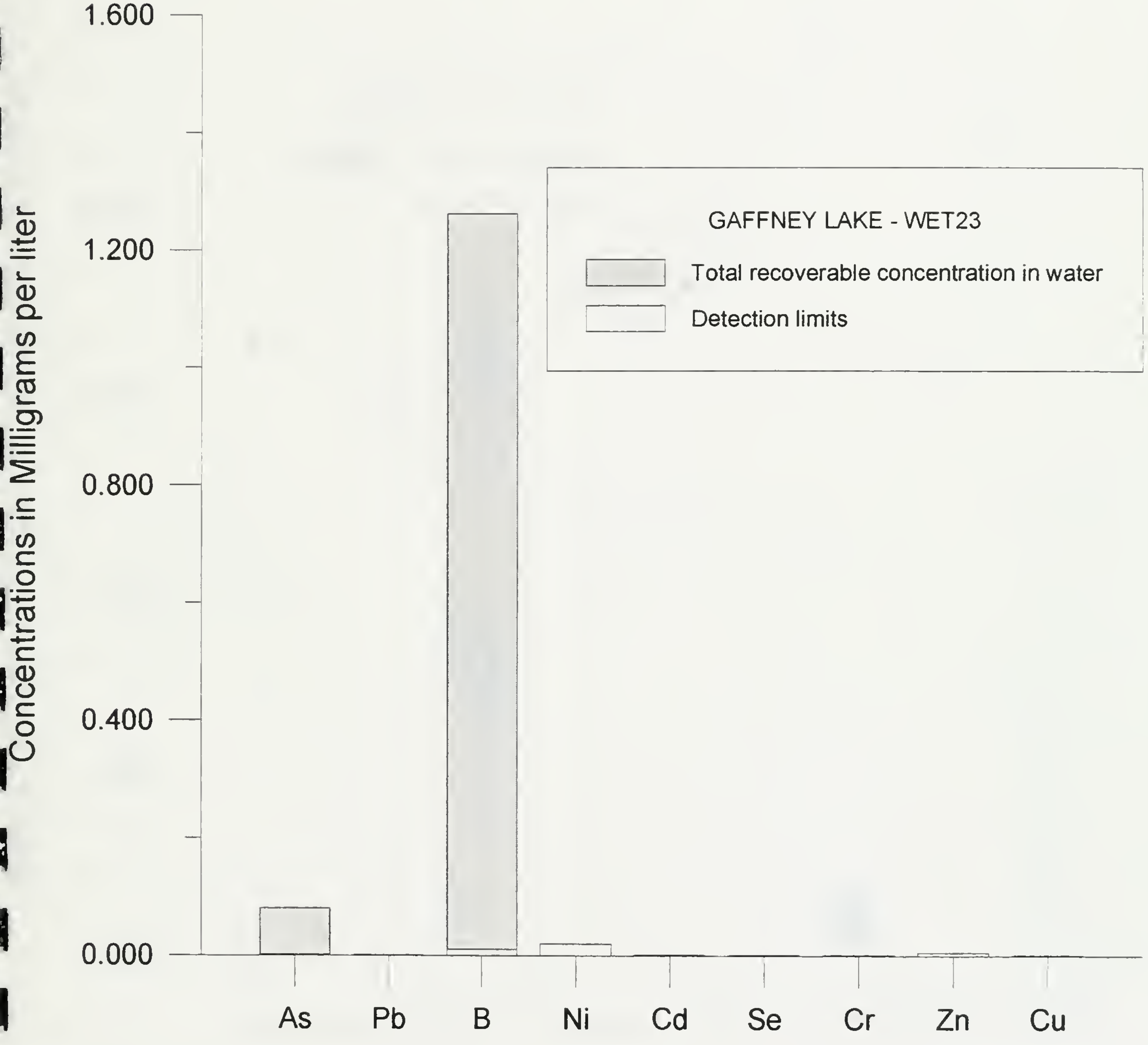
Primary bedrock geologic unit 125FRUN


Total Annual Precipitation for Medicine Lake
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Total Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1910
1920
1930
1940
1950
1960
1970
1980
1990

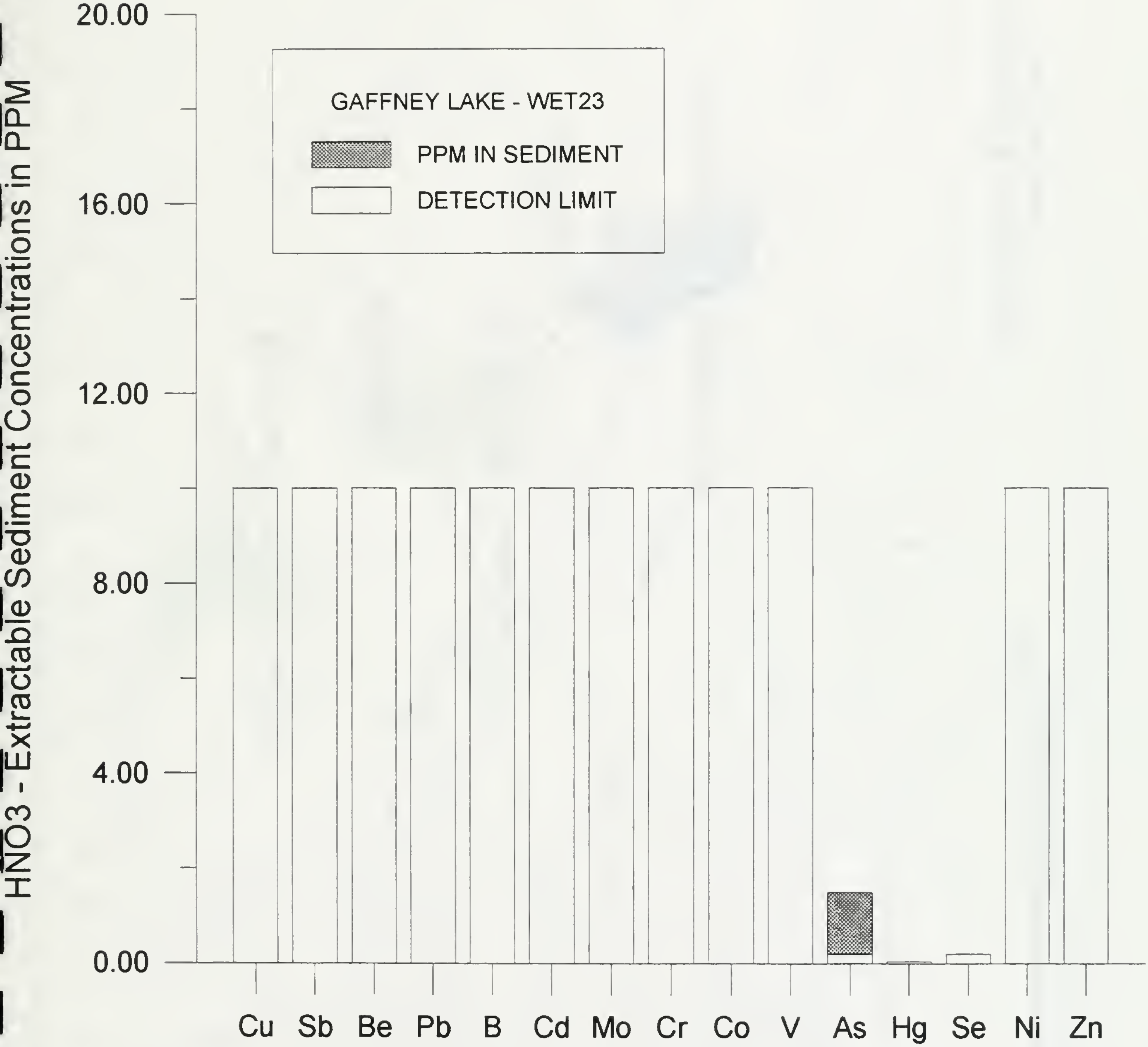


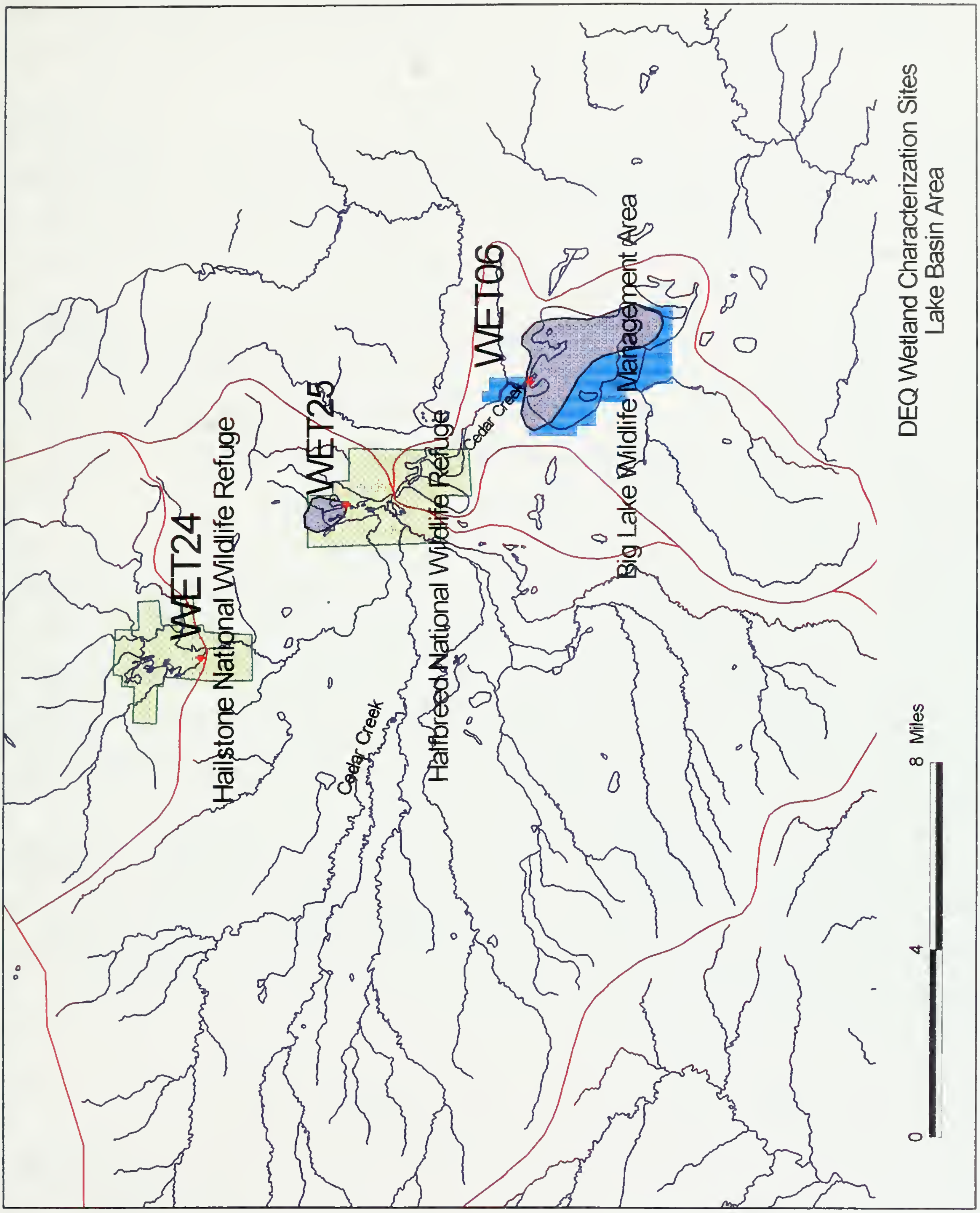
Monthly Average, Maximum and Minimum Precipitation

Medicine Lake



Concentrations in Milligrams per liter
1.600
1.200
0.800
0.400
0.000
GAFFNEY LAKE - WET23
Total recoverable concentration in water
Detection limits
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
20.00
16.00
12.00
8.00
4.00
0.00
GAFFNEY LAKE - WET23
▨ PPM IN SEDIMENT
☐ DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn


DEQ Wetland Characterization Sites
Lake Basin Area

WET24
Hailstone National Wildlife Refuge
WET25
Halfbreed National Wildlife Refuge
WET06
Big Lake Wildlife Management Area
Cedar Creek
Cedar Creek
0
4
8
Miles

Wetland: HAILSTONE NWR

Site Code: WET24

7.5 Minute Quad: HAILSTONE BASIN

Lat: 46 0 10
Long: 109 10 50

Mean Annual Precipitation in Inches: 13.00

Mean Annual Potential Evaporation (Penman) in Inches: 42.00

'Net Precipitation' in Inches: -29.00

Site has a mapped surface inlet.

Site has a mapped surface outlet.

Site is artificially impounded.

Site does not have known significant water imports.

Mapped area of wetland: 538 acres

Area of contributing drainage basin: 27860 acres

Mapped elevation of wetland surface: 3990 ft

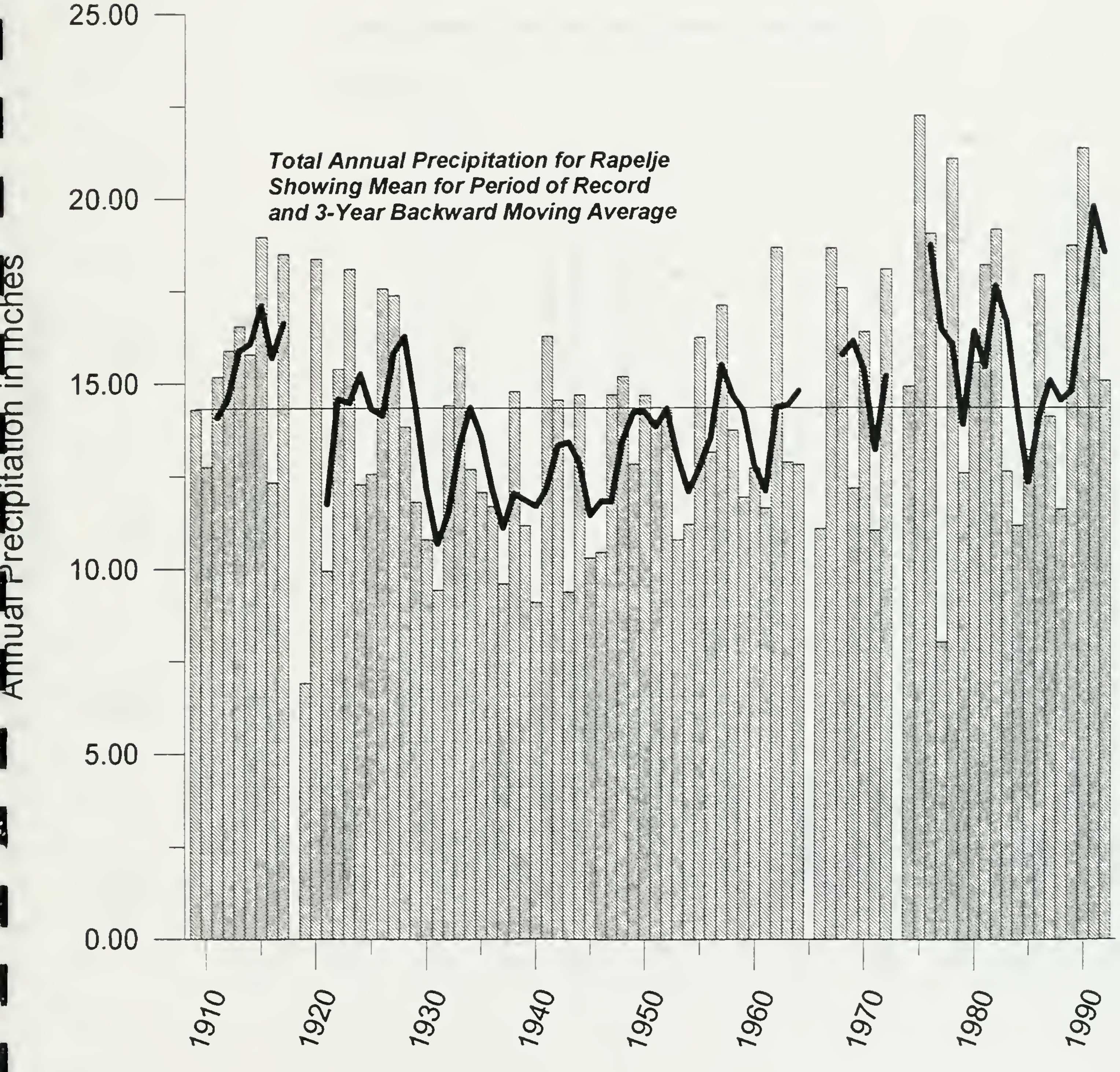
Maximum elevation within drainage basin: 4728 ft

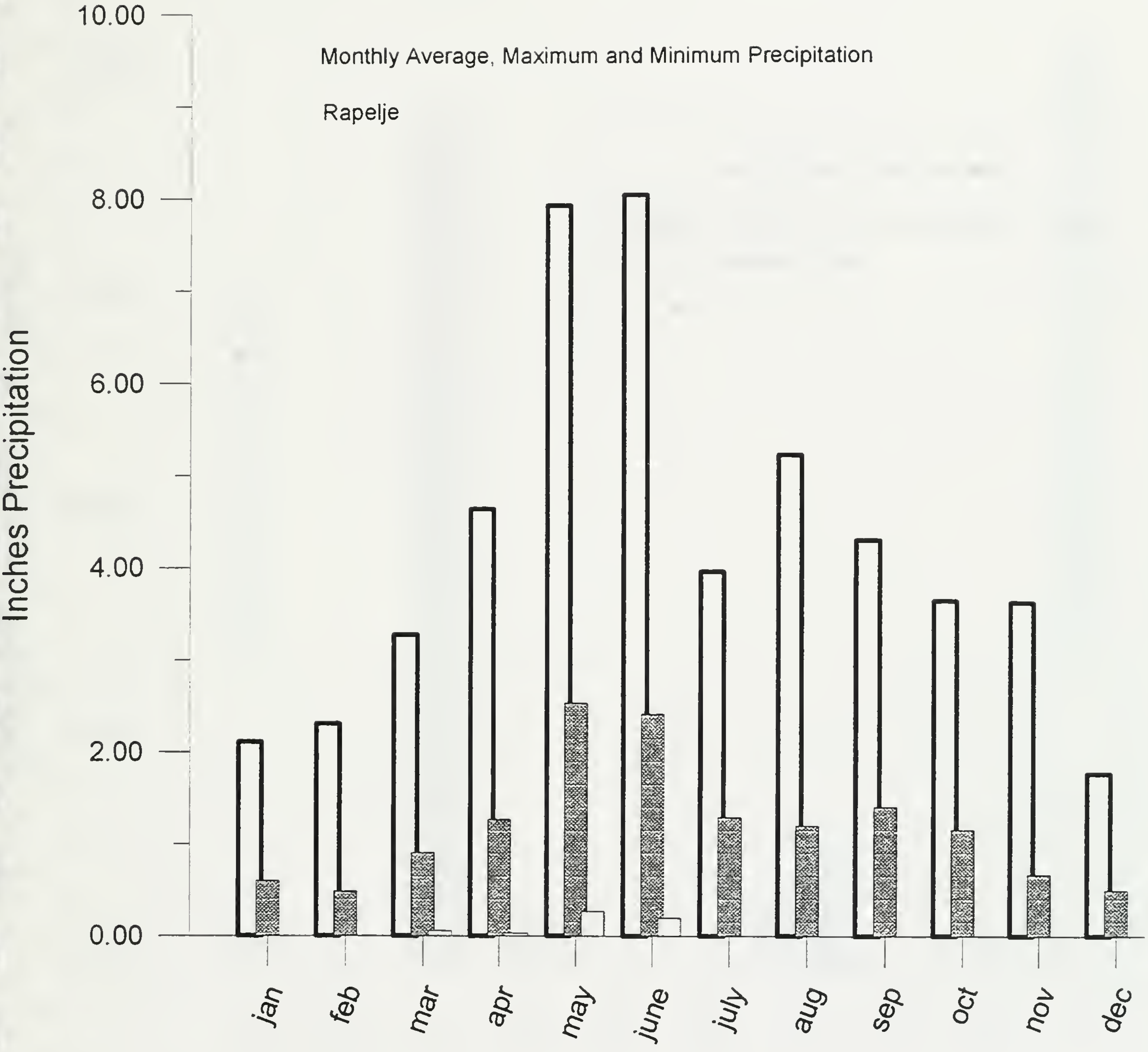
Net relief of contributing basin: 738 ft

COE Hydrogeomorphic class: FRINGE

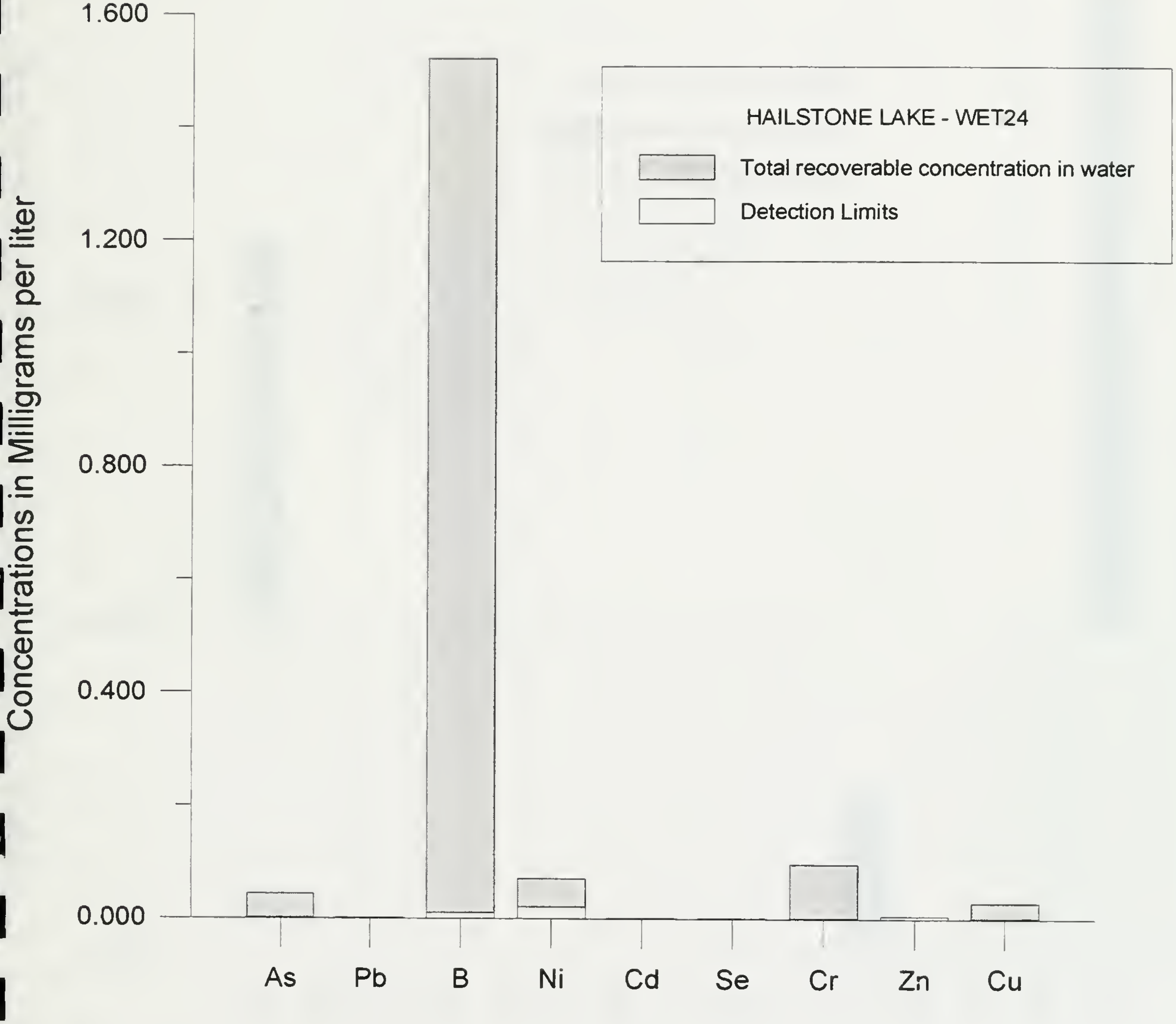
Primary surficial geologic unit 110"LAC"

Primary bedrock geologic unit 210CRCS

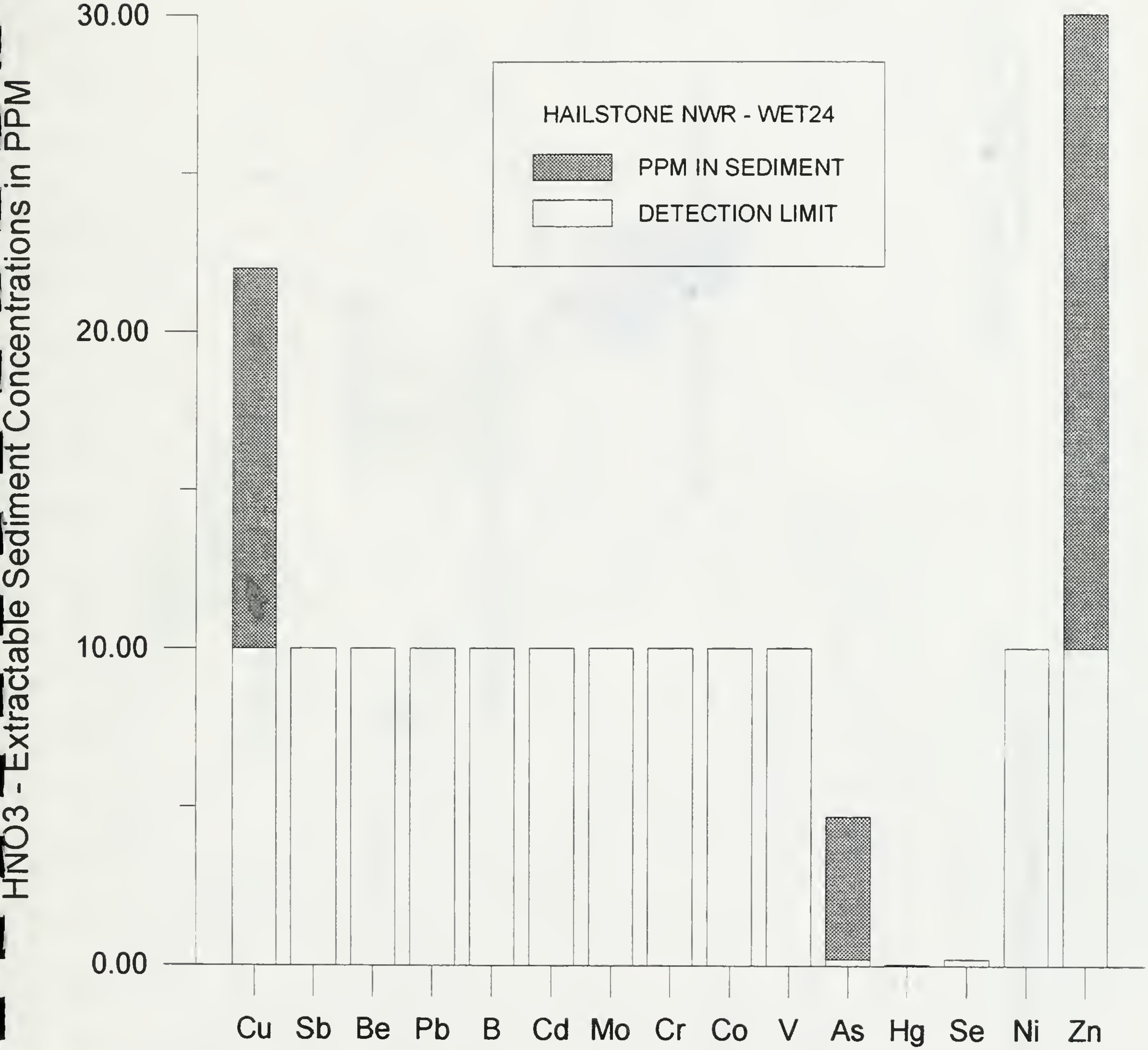

Total Annual Precipitation for Rapelje
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1910
1920
1930
1940
1950
1960
1970
1980
1990



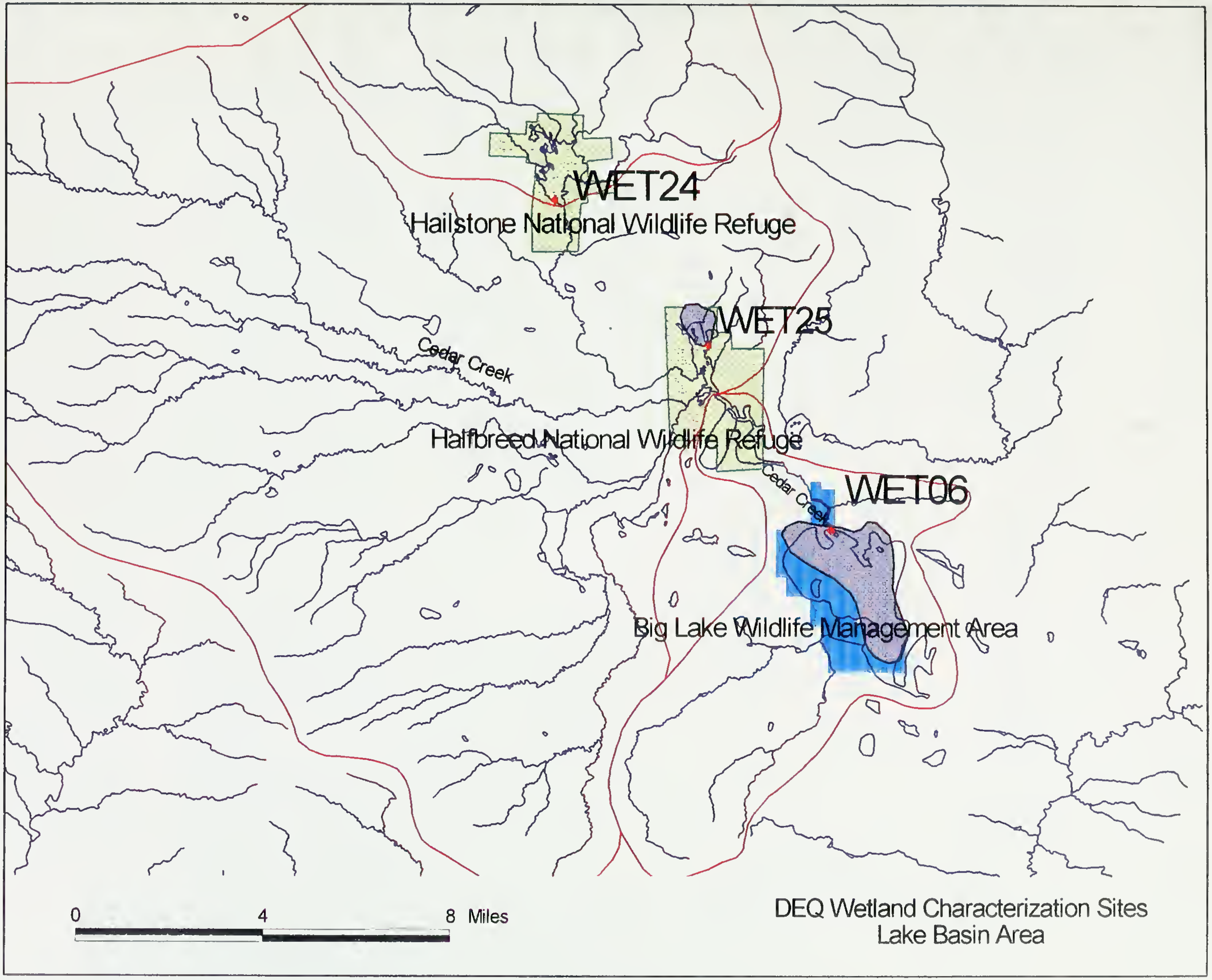
10.00
8.00
6.00
4.00
2.00
0.00
Inches Precipitation
Monthly Average, Maximum and Minimum Precipitation
Rapelje
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec



HAILSTONE LAKE - WET24
Total recoverable concentration in water
Detection Limits
Concentrations in Milligrams per liter
1.600
1.200
0.800
0.400
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu



HNO3 - Extractable Sediment Concentrations in PPM
30.00
20.00
10.00
0.00
HAILSTONE NWR - WET24
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn


WET24
Hailstone National Wildlife Refuge
WET25
Cedar Creek
Halfbreed National Wildlife Refuge
Cedar Creek
WET06
Big Lake Wildlife Management Area
0
4
8 Miles

DEQ Wetland Characterization Sites
Lake Basin Area

Wetland: HALFBREED NWR

Site Code: WET25

7.5 Minute Quad: WHEAT BASIN

Lat: 45 57 30
Long: 109 6 45

Mean Annual Precipitation in Inches: 13.00

Mean Annual Potential Evaporation (Penman) in Inches: 41.00

'Net Precipitation' in Inches: -28.00

Site has a mapped surface inlet.

Site has a mapped surface outlet.

Site is not known to be artificially impounded.

Site does not have known significant water imports.

Mapped area of wetland: 278 acres

Area of contributing drainage basin: 141960 acres

Mapped elevation of wetland surface: 3935 ft

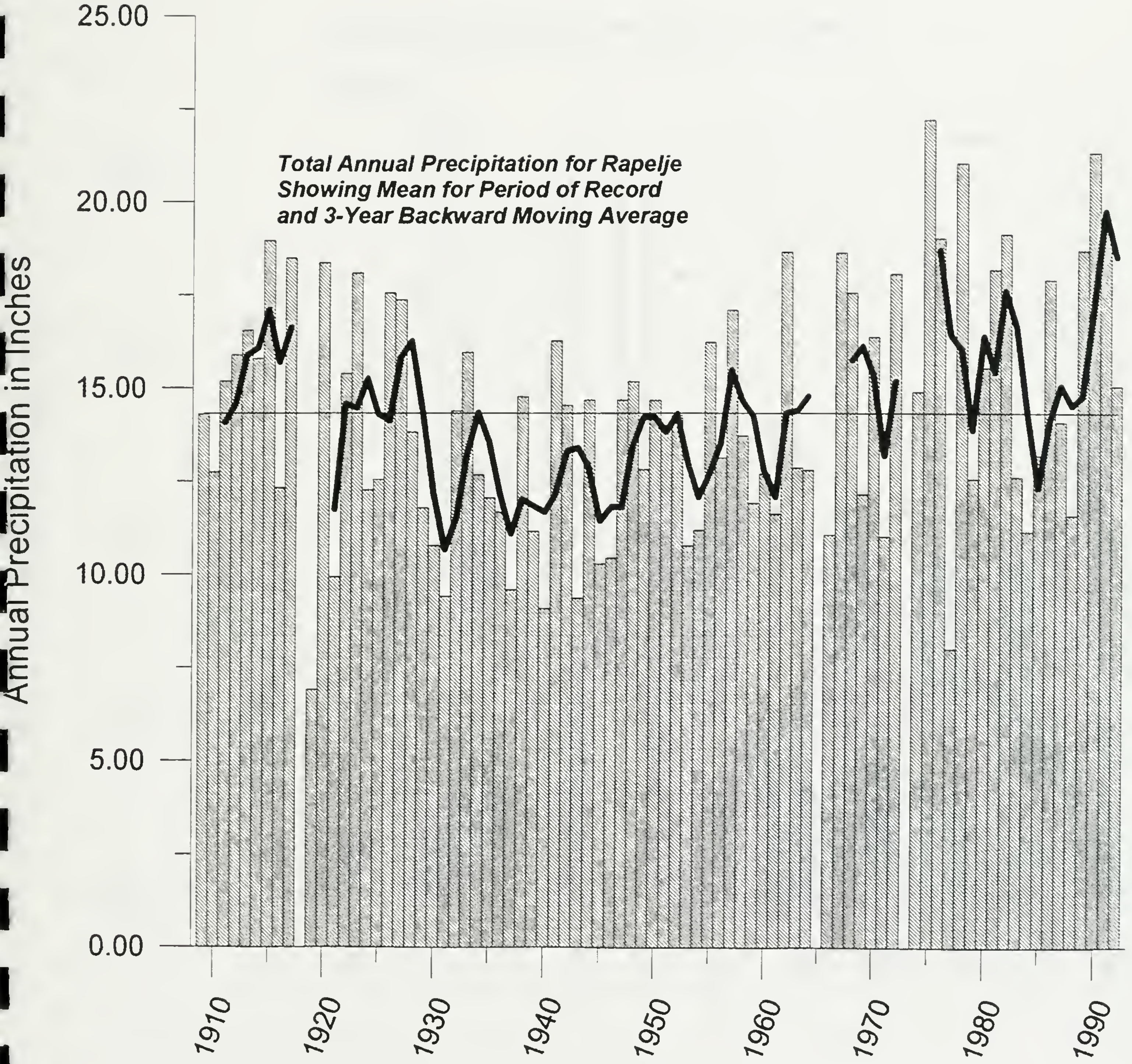
Maximum elevation within drainage basin: 5325 ft

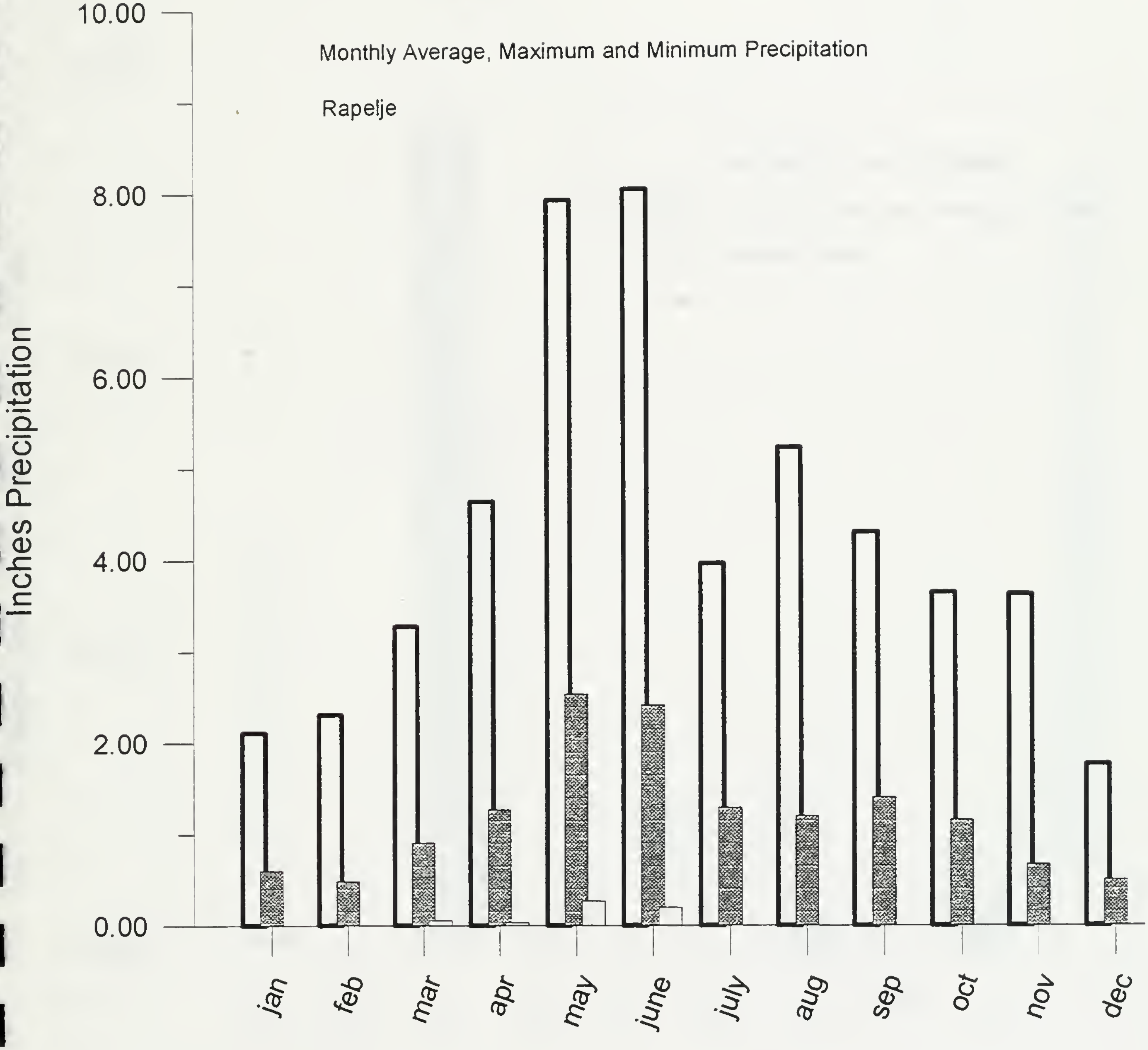
Net relief of contributing basin: 1390 ft

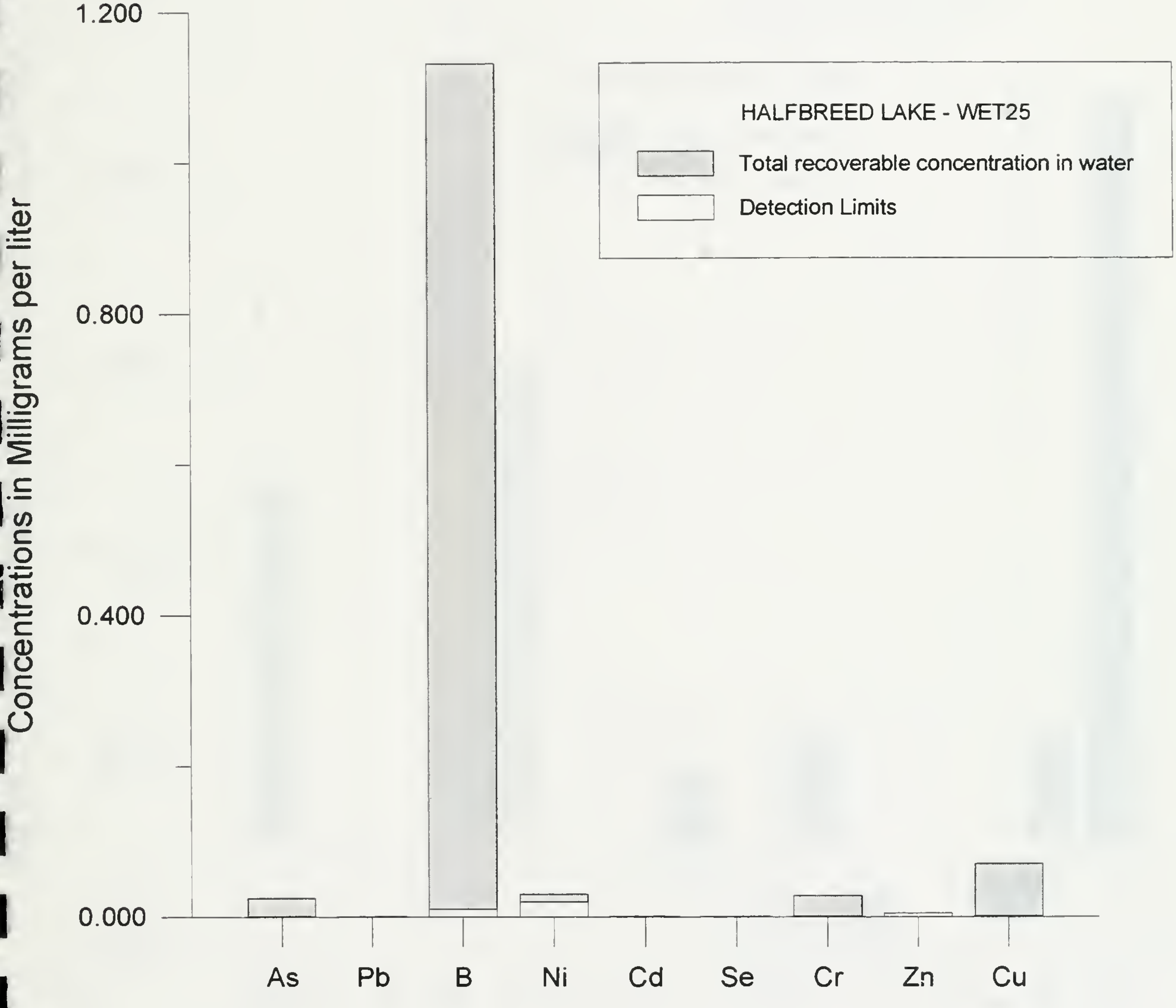
COE Hydrogeomorphic class: FRINGE

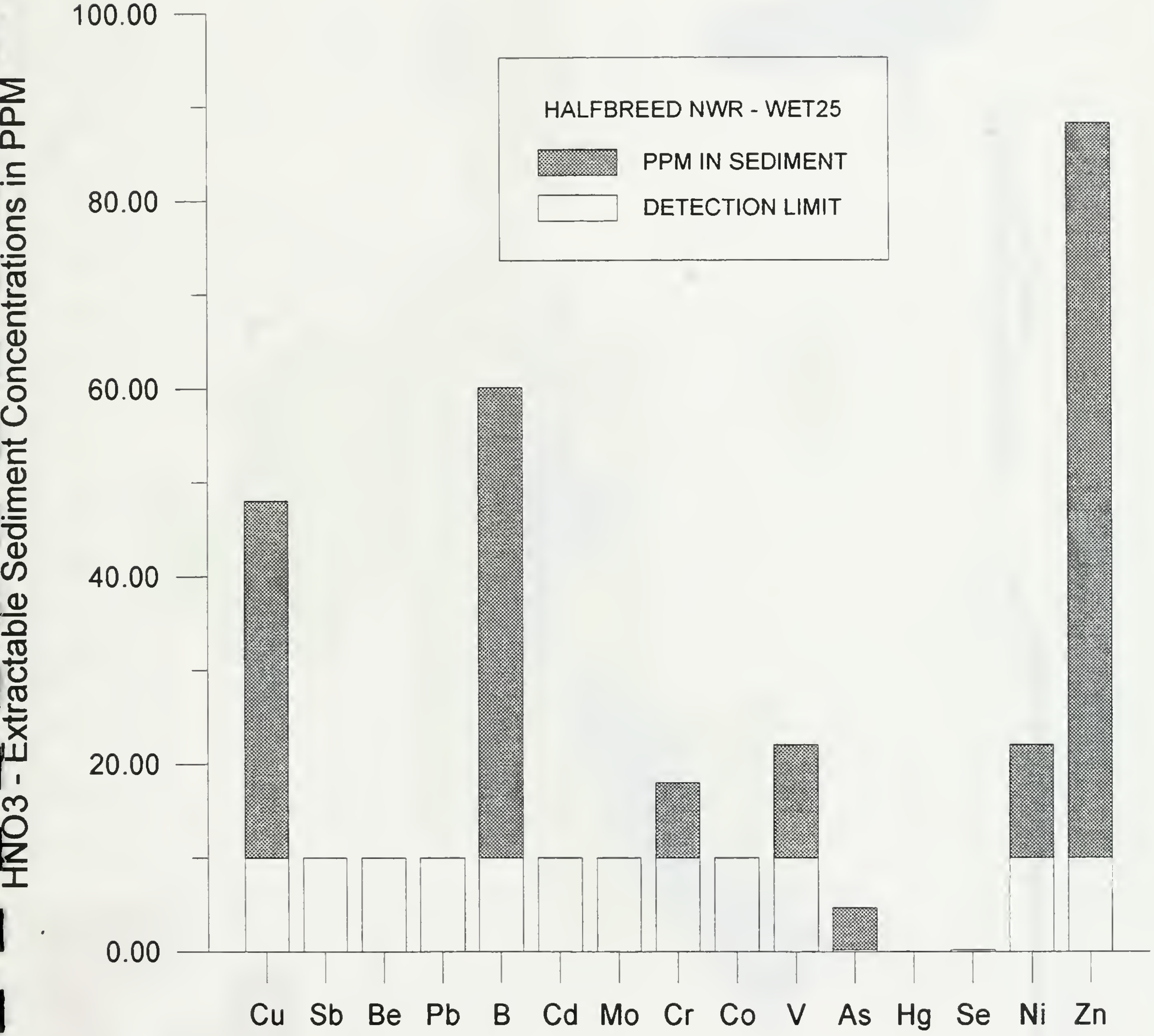
Primary surficial geologic unit 110"LAC"

Primary bedrock geologic unit 210CRCS

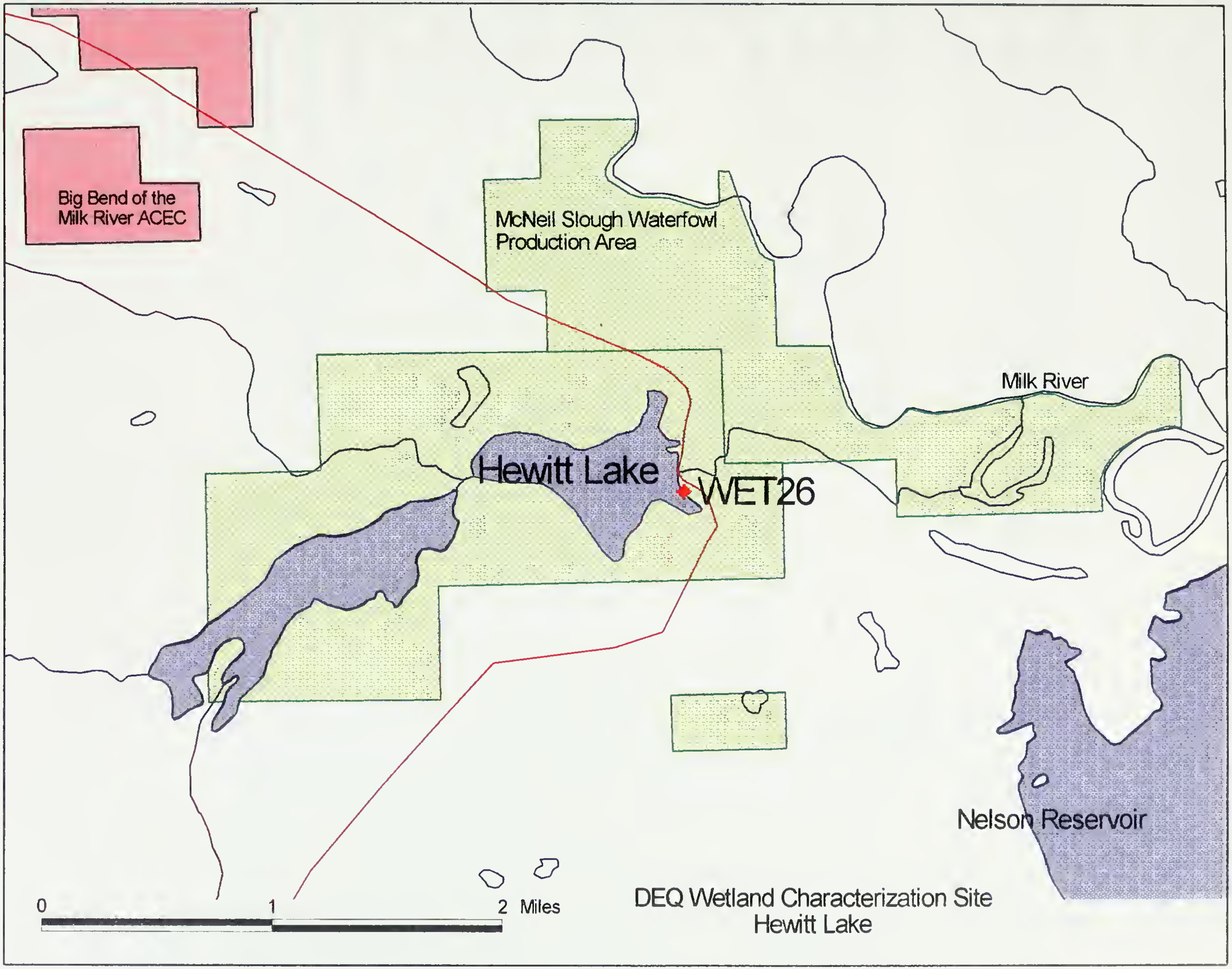

Total Annual Precipitation for Rapelje
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1910
1920
1930
1940
1950
1960
1970
1980
1990


Monthly Average, Maximum and Minimum Precipitation
Rapelje
Inches Precipitation
10.00
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec


Concentrations in Milligrams per liter
1.200
0.800
0.400
0.000
HALFBREED LAKE - WET25
Total recoverable concentration in water
Detection Limits
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu



HNO3 - Extractable Sediment Concentrations in PPM
100.00
80.00
60.00
40.00
20.00
0.00
HALFBREED NWR - WET25
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Hewitt Lake

Wetland: HEWITT LAKE NWR

Site Code: WET26

7.5 Minute Quad: HEWITT LAKE

Lat: 48 32 15
Long: 107 34 55

Mean Annual Precipitation in Inches: 11.00

Mean Annual Potential Evaporation (Penman) in Inches: 39.00

'Net Precipitation' in Inches: -28.00

Site has a mapped surface inlet.

Site has a mapped surface outlet.

Site is artificially impounded.

Site does not have known significant water imports.

Mapped area of wetland: 180 acres

Area of contributing drainage basin: 12400 acres

Mapped elevation of wetland surface: 2197 ft

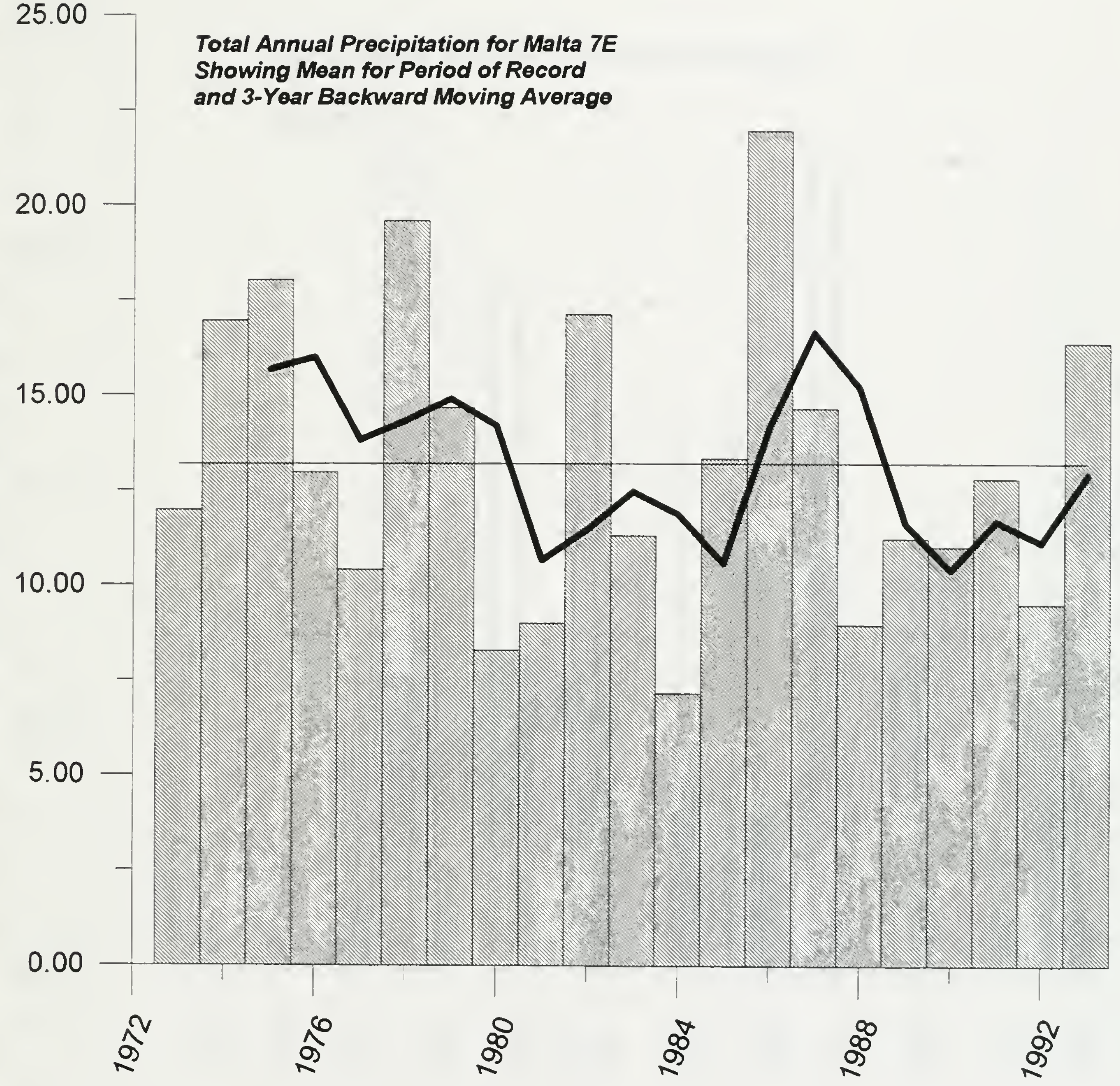
Maximum elevation within drainage basin: 2480 ft

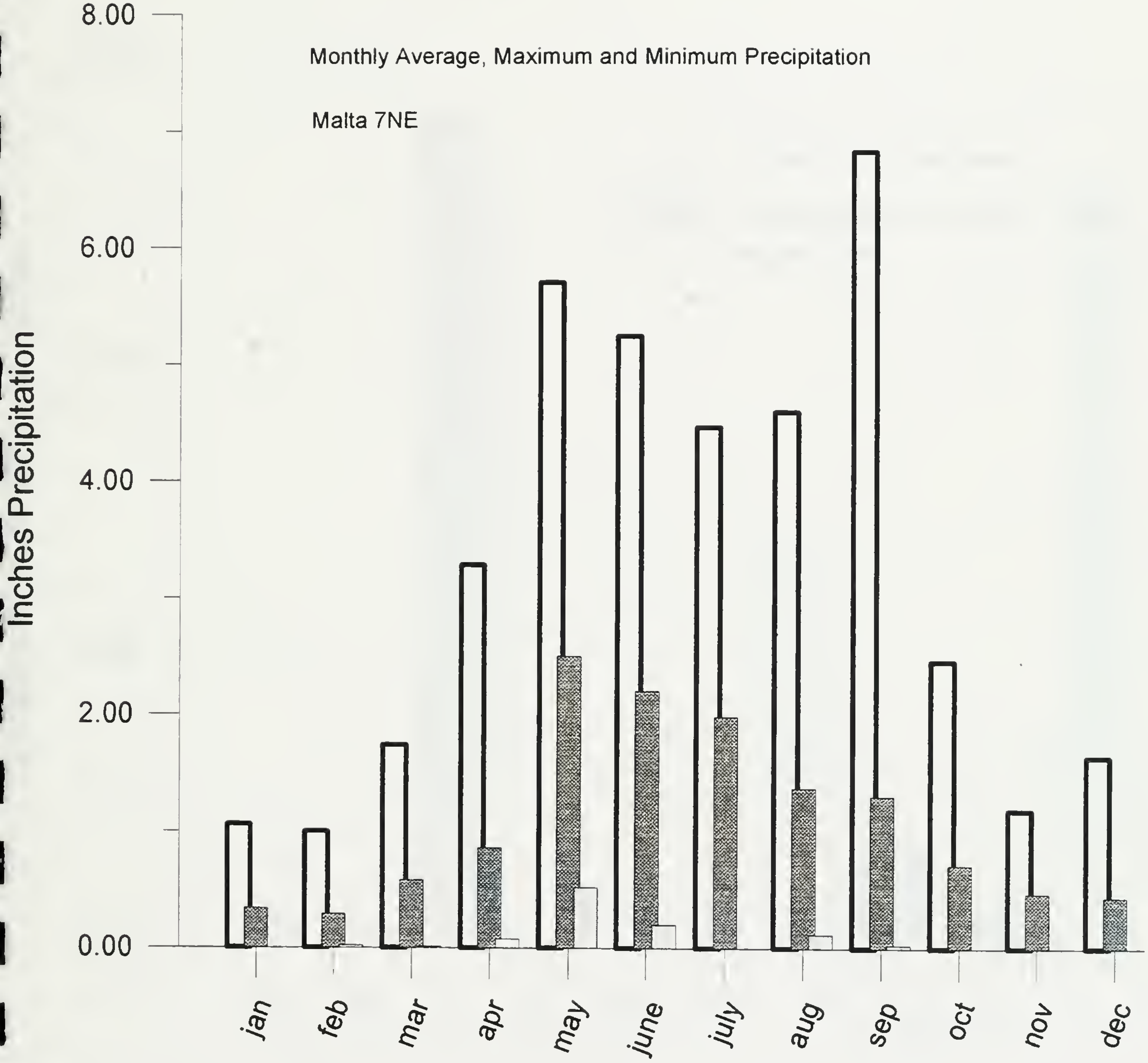
Net relief of contributing basin: 283 ft

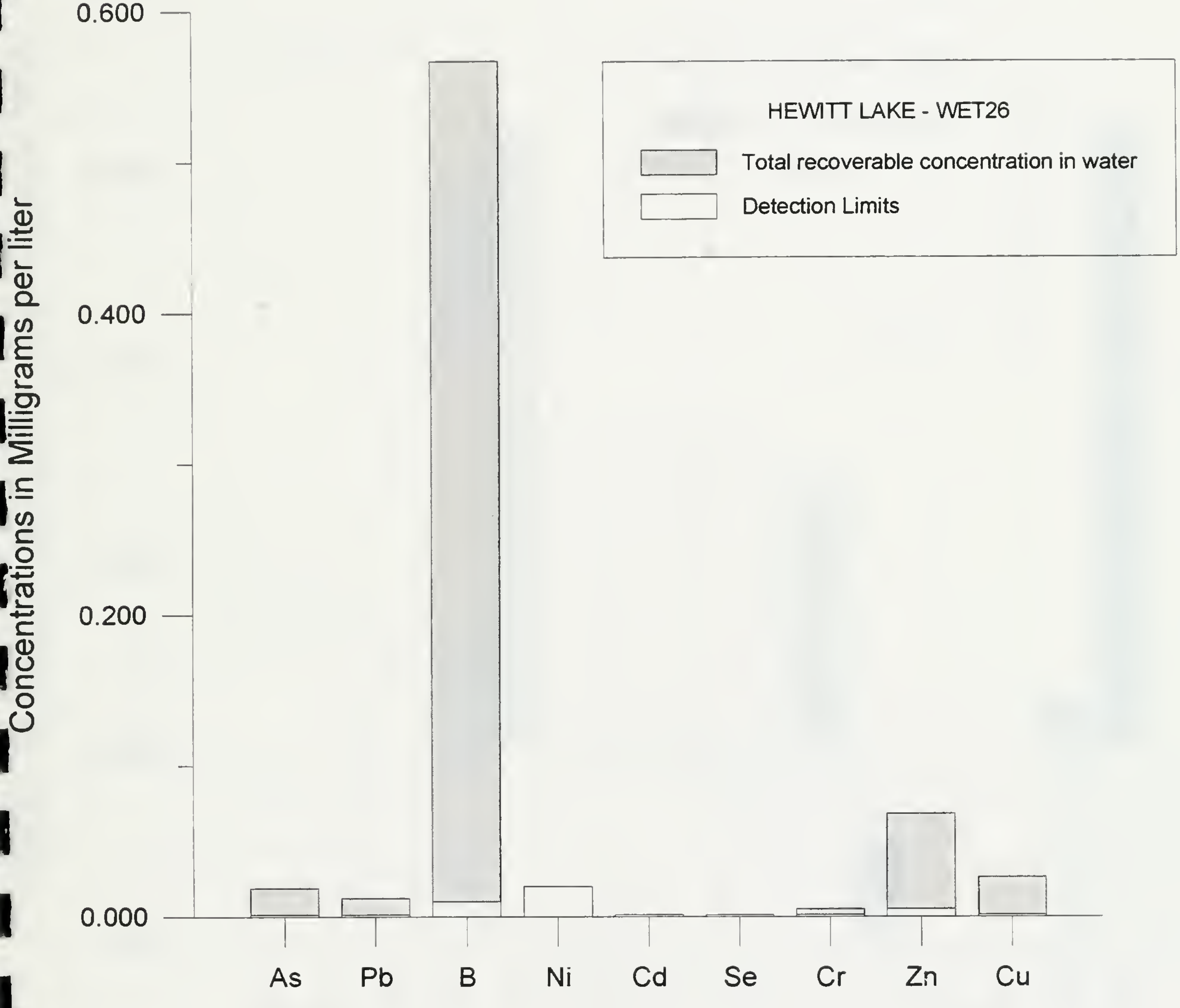
COE Hydrogeomorphic class: FRINGE

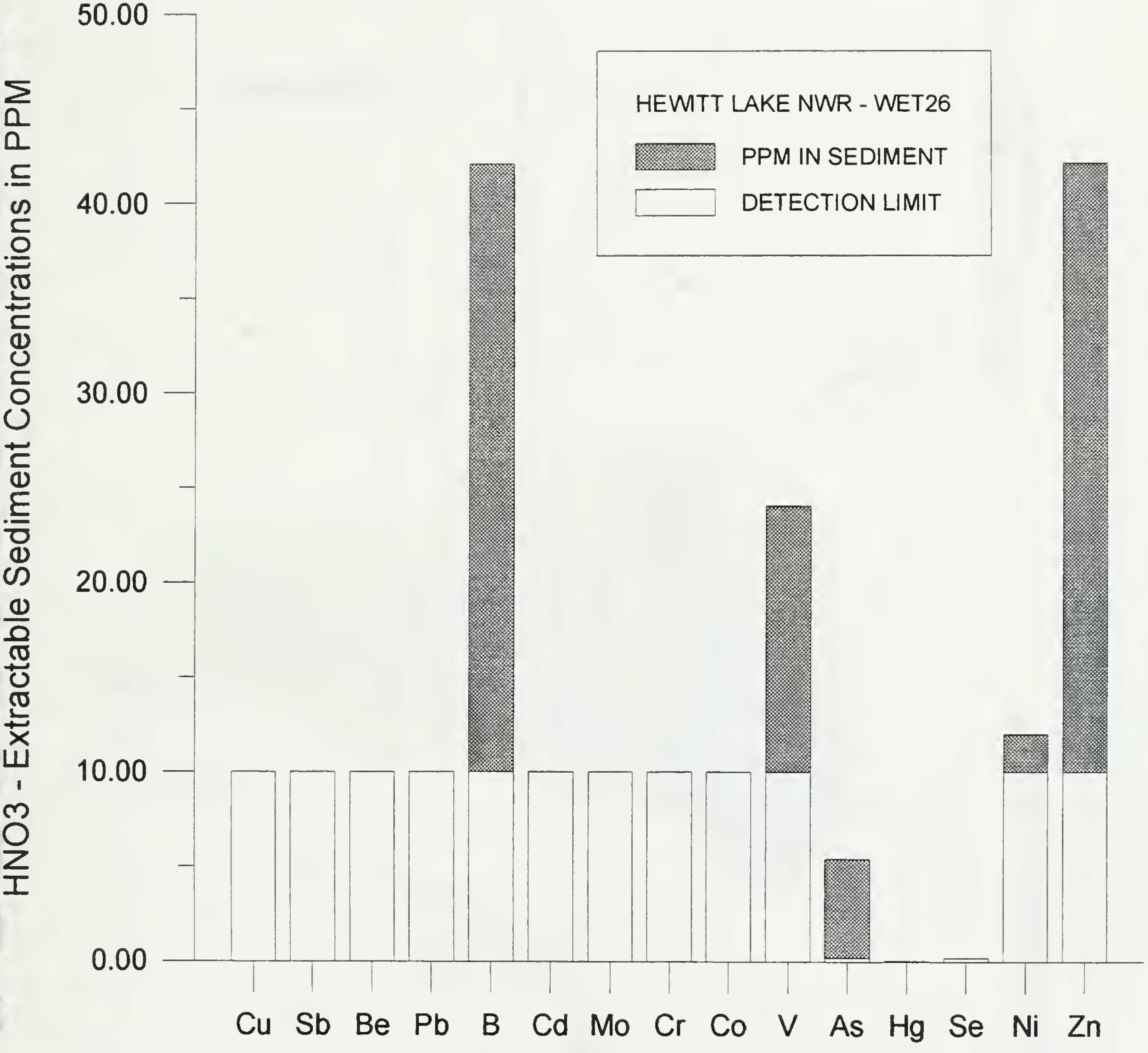
Primary surficial geologic unit 112DRFT

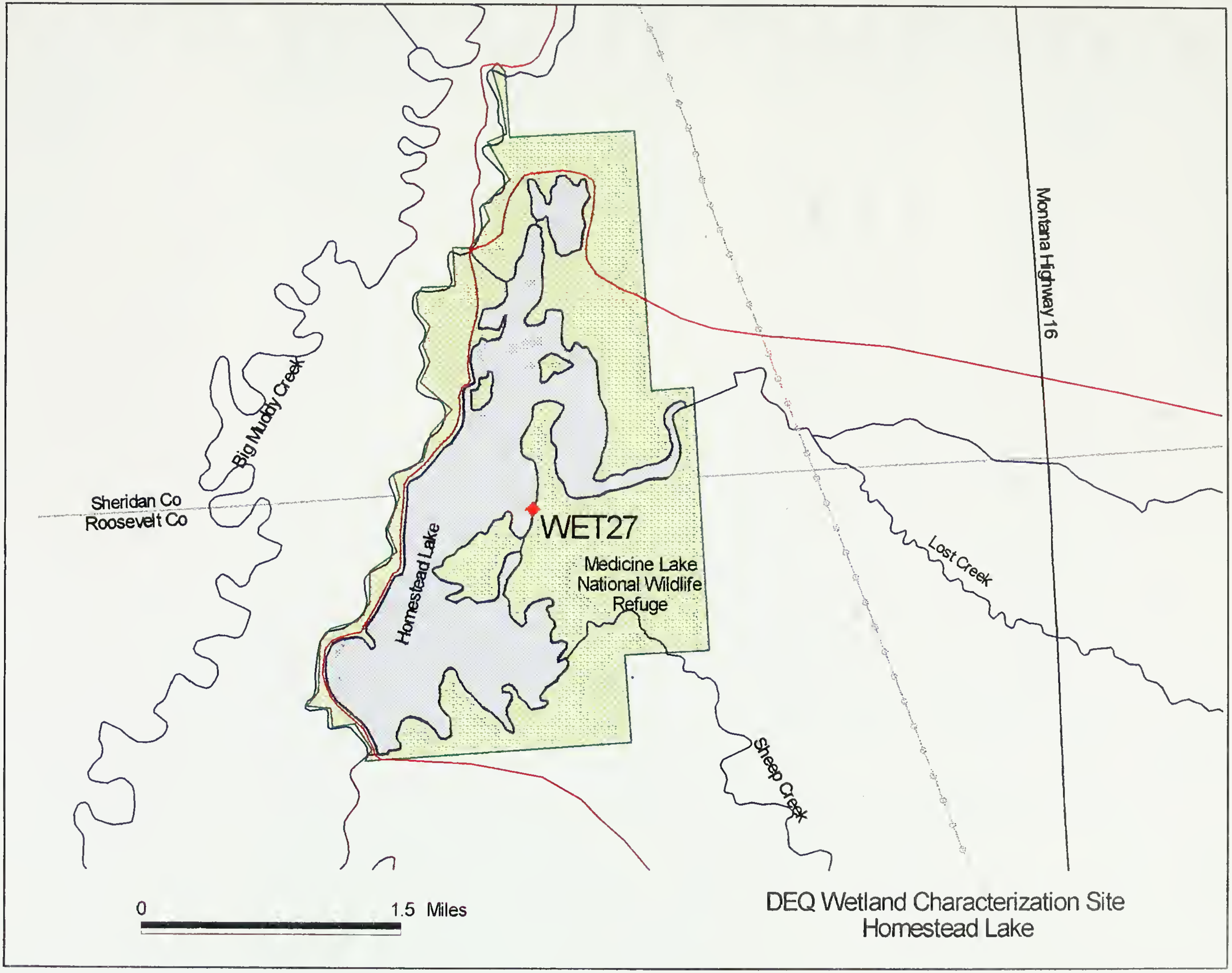
Primary bedrock geologic unit 211CLGG


Total Annual Precipitation for Malta 7E
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1972
1976
1980
1984
1988
1992

Monthly Average, Maximum and Minimum Precipitation
Malta 7NE
Inches Precipitation
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec


HEWITT LAKE - WET26
Total recoverable concentration in water
Detection Limits
Concentrations in Milligrams per liter
0.600
0.400
0.200
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HEWITT LAKE NWR - WET26
PPM IN SEDIMENT
DETECTION LIMIT
HNO3 - Extractable Sediment Concentrations in PPM
50.00
40.00
30.00
20.00
10.00
0.00
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Homestead Lake

Wetland: HOMESTEAD LAKE

Site Code: WET27

7.5 Minute Quad: HOMESTEAD

Lat: 48 23 15
Long: 104 33 15

Mean Annual Precipitation in Inches: 13.00

Mean Annual Potential Evaporation (Penman) in Inches: 38.00

'Net Precipitation' in Inches: -25.00

Site has a mapped surface inlet.

Site has a mapped surface outlet.

Site is artificially impounded.

Site has significant water imports.

Mapped area of wetland: 1240 acres

Area of contributing drainage basin: 64500 acres

Mapped elevation of wetland surface: 1935 ft

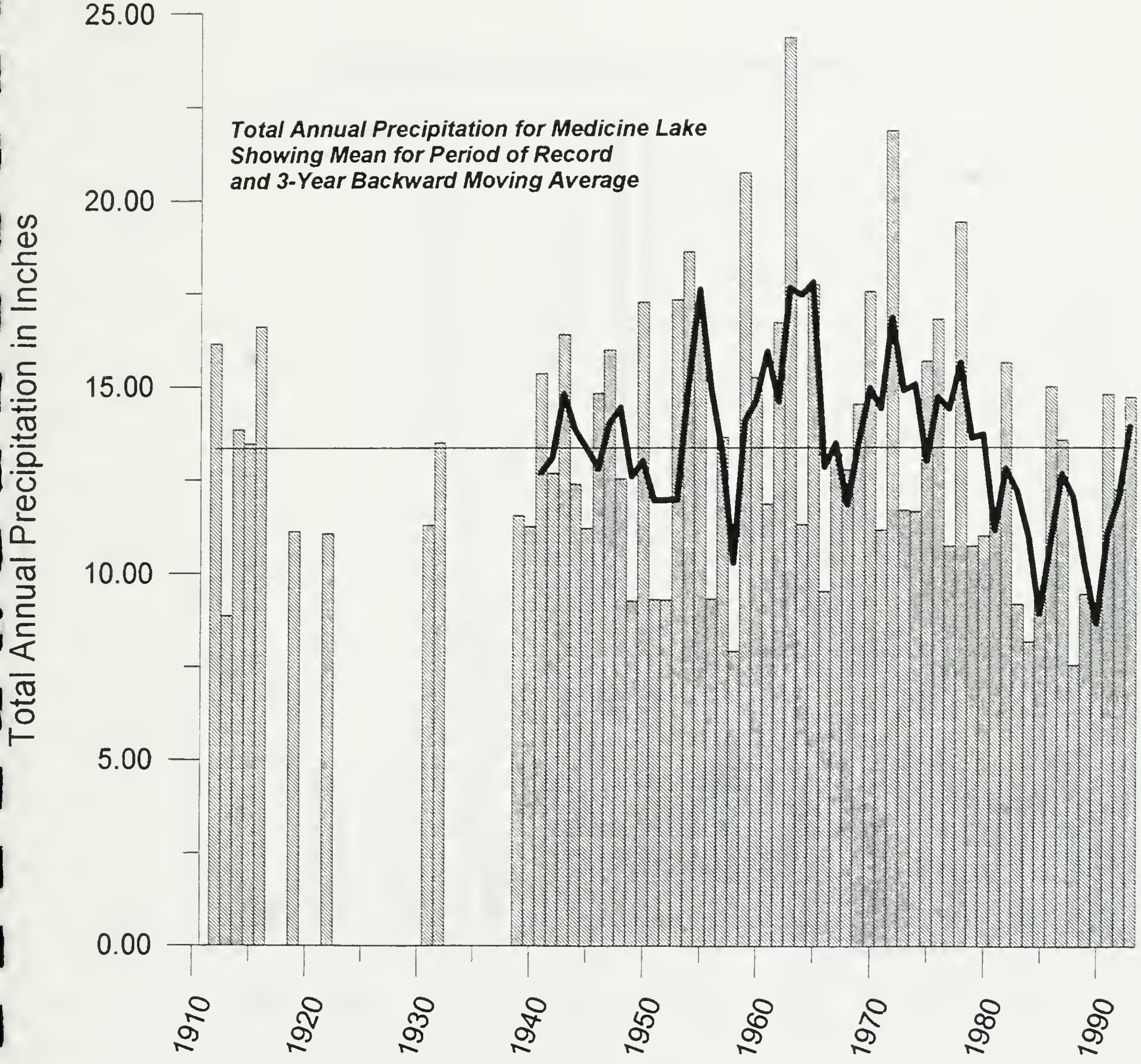
Maximum elevation within drainage basin: 2460 ft

Net relief of contributing basin: 525 ft

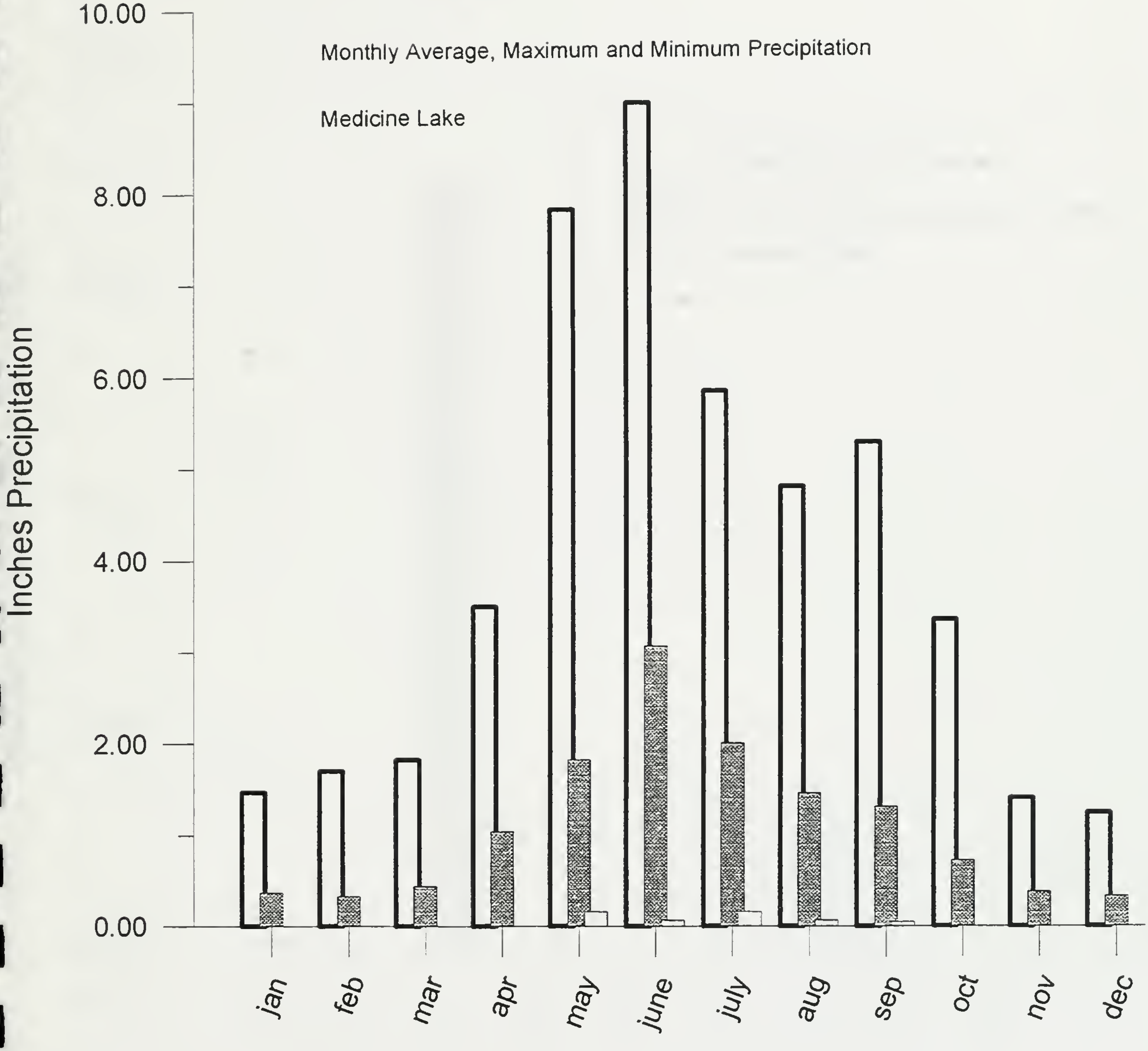
COE Hydrogeomorphic class: FRINGE

Primary surficial geologic unit 112OTSH

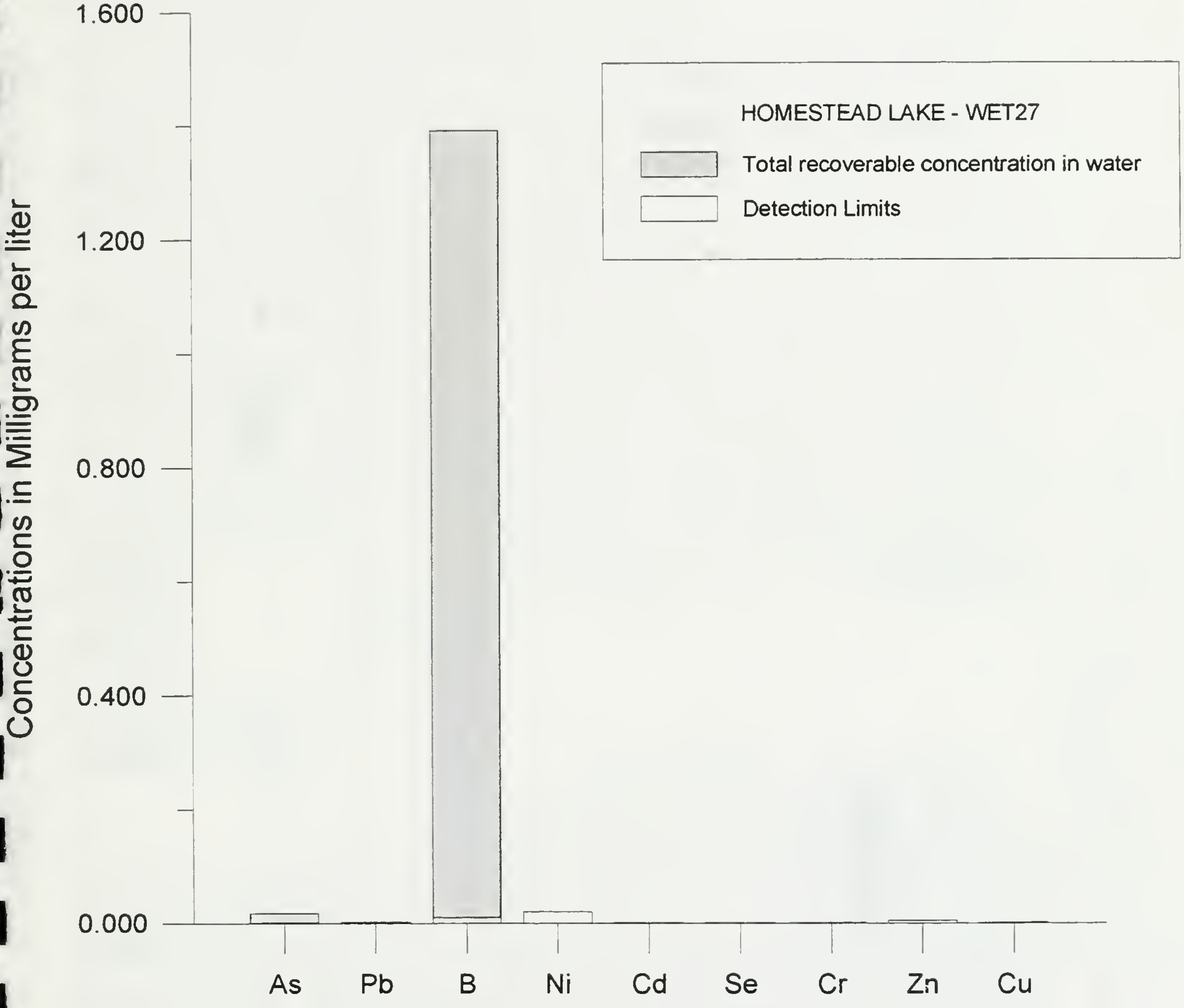
Primary bedrock geologic unit 125FRUN



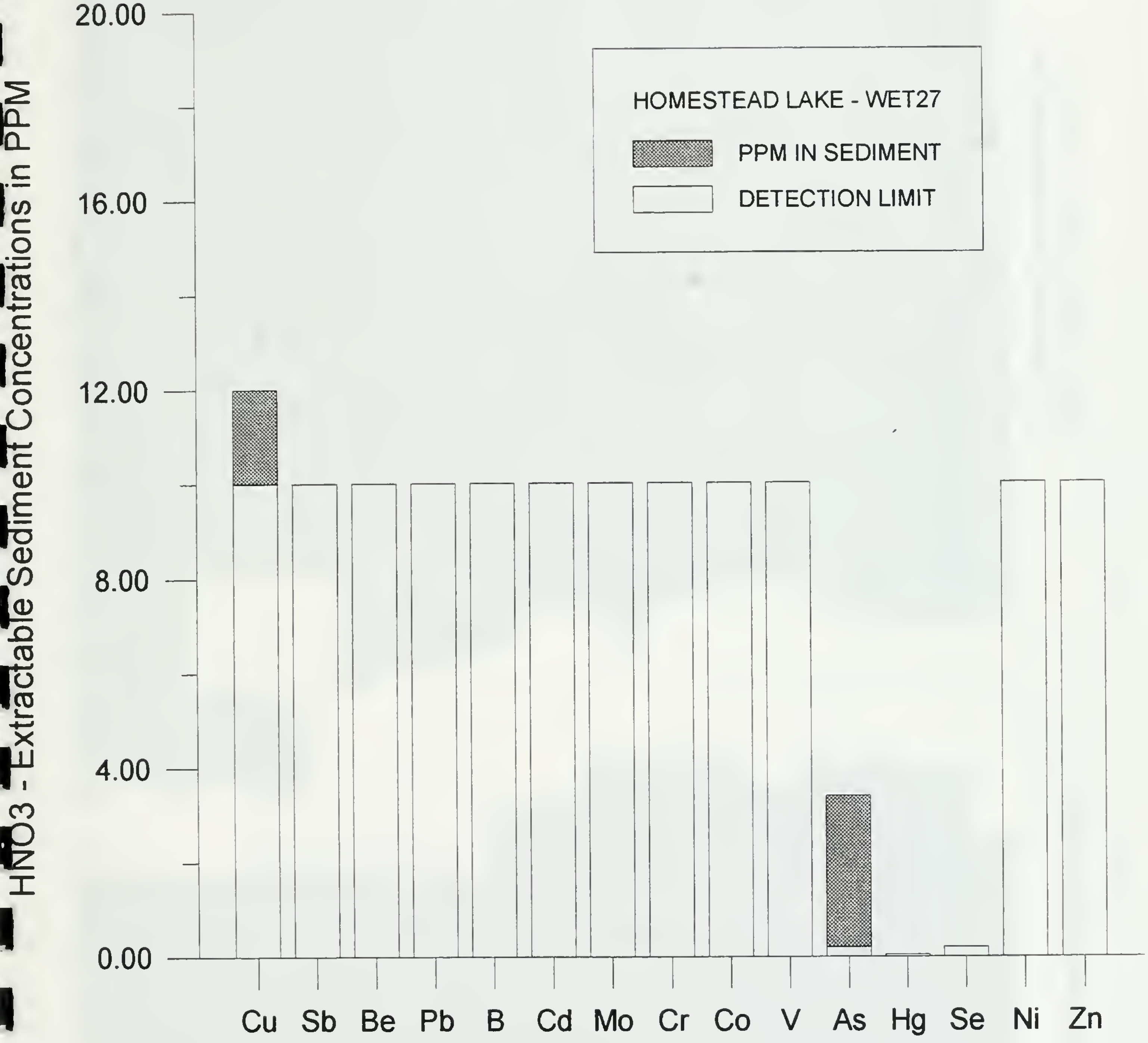
Total Annual Precipitation for Medicine Lake
Showing Mean for Period of Record
and 3-Year Backward Moving Average

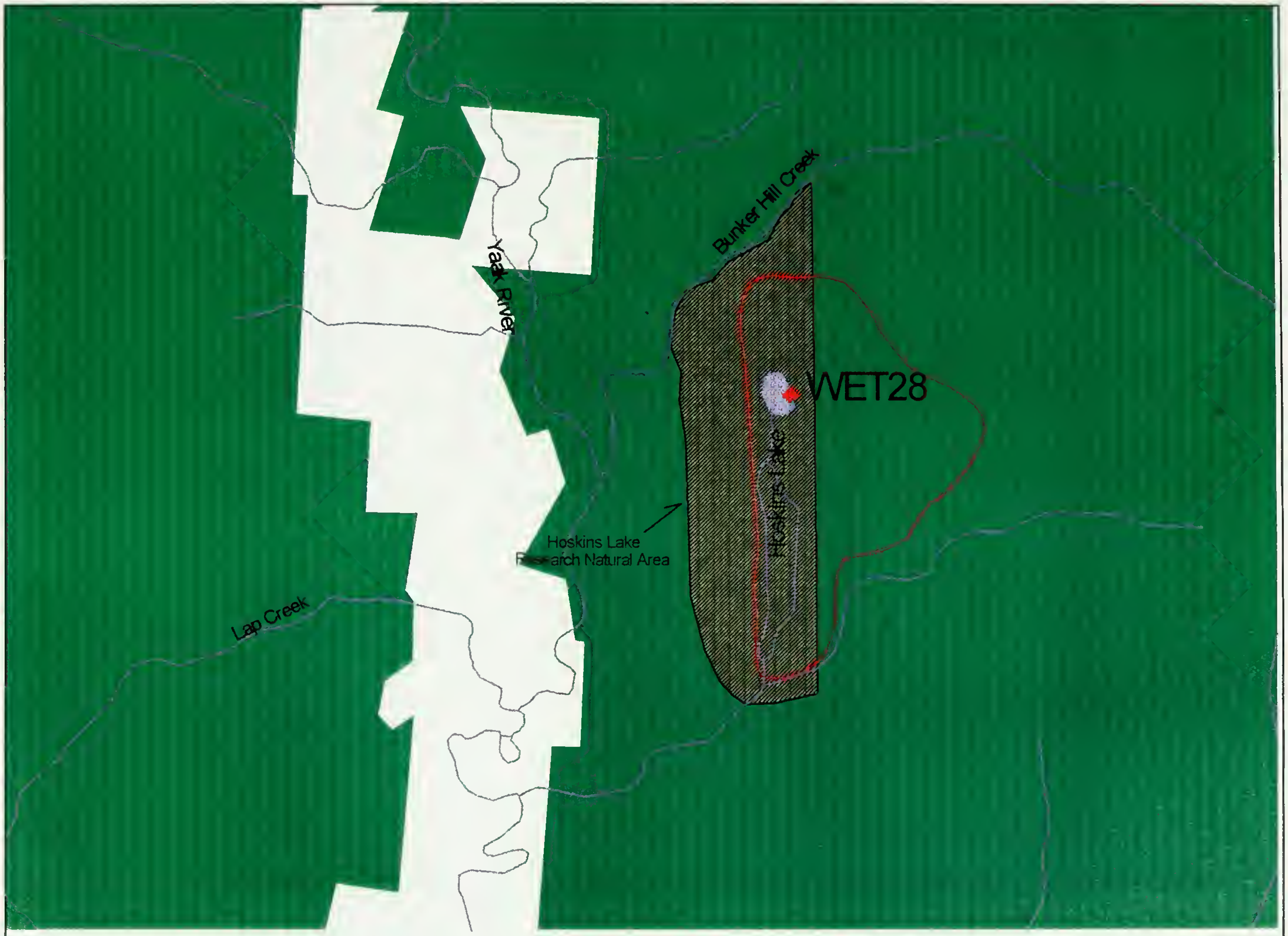


Monthly Average, Maximum and Minimum Precipitation
Medicine Lake
Inches Precipitation
10.00
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec



Concentrations in Milligrams per liter
1.600
1.200
0.800
0.400
0.000
HOMESTEAD LAKE - WET27
Total recoverable concentration in water
Detection Limits
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
20.00
16.00
12.00
8.00
4.00
0.00
HOMESTEAD LAKE - WET27
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Hoskins Lake Research Natural Area

Wetland: HOSKINS LAKE RNA	Site Code: WET28
7.5 Minute Quad: BONNET TOP	Lat: 48 53 40 Long: 115 38 10

Mean Annual Precipitation in Inches:	35.00
Mean Annual Potential Evaporation (Penman) in Inches:	28.00
'Net Precipitation' in Inches:	7.00

Site does not have a mapped surface inlet.

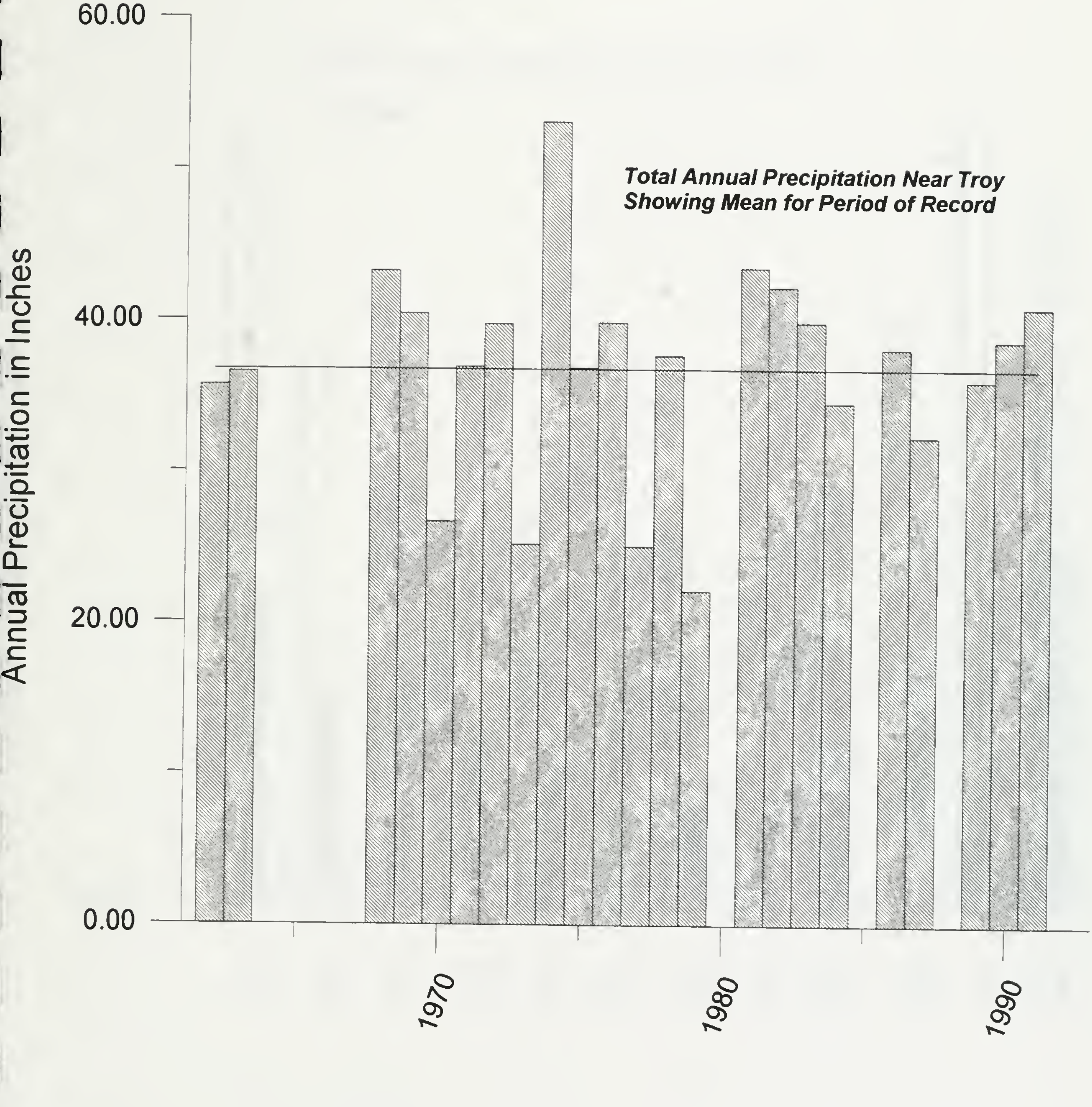
Site has a mapped surface outlet.

Site is not known to be artificially impounded.

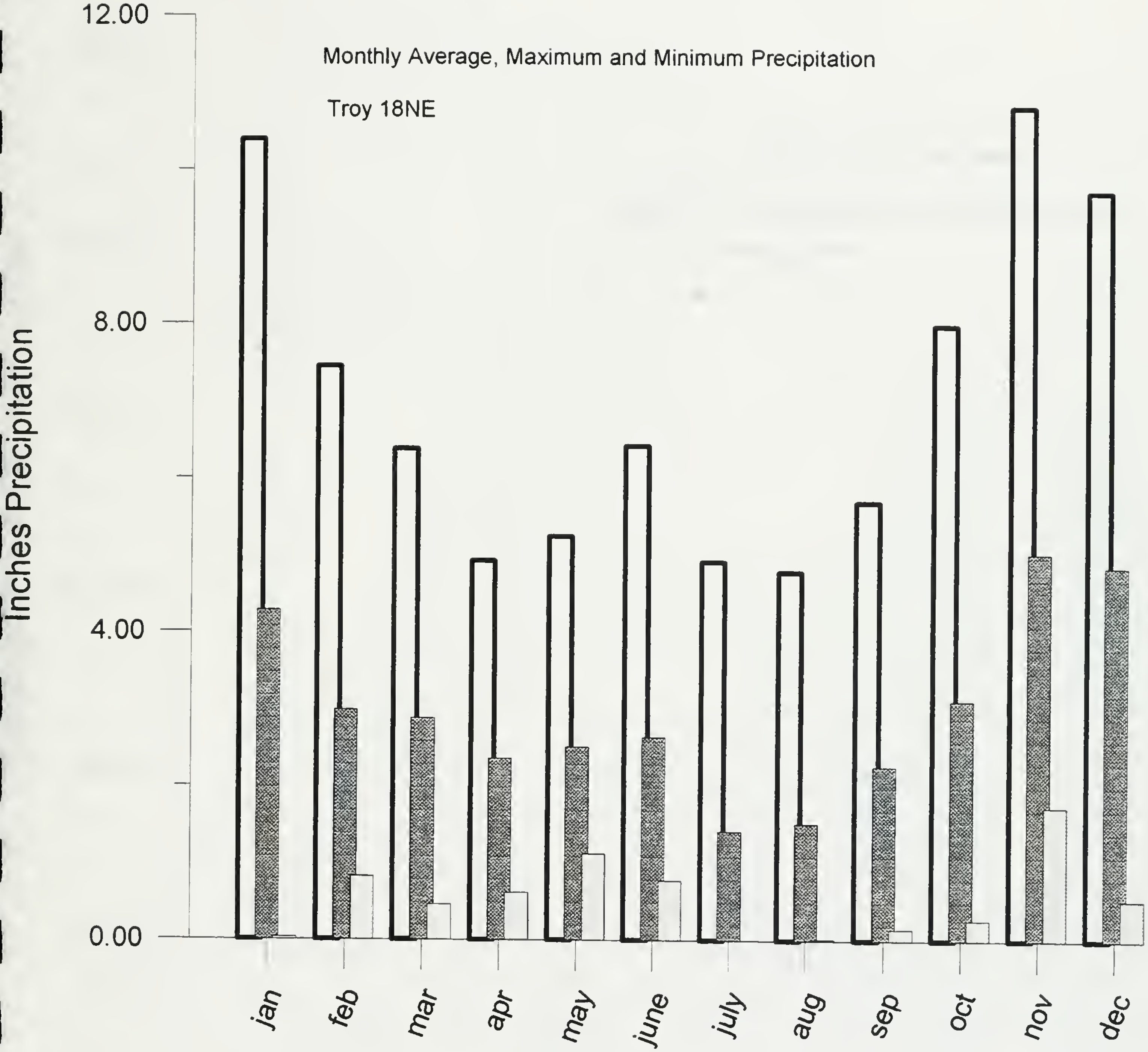
Site does not have known significant water imports.

Mapped area of wetland:	8 acres
Area of contributing drainage basin:	430 acres
Mapped elevation of wetland surface:	3650 ft
Maximum elevation within drainage basin:	4725 ft
Net relief of contributing basin:	1075 ft

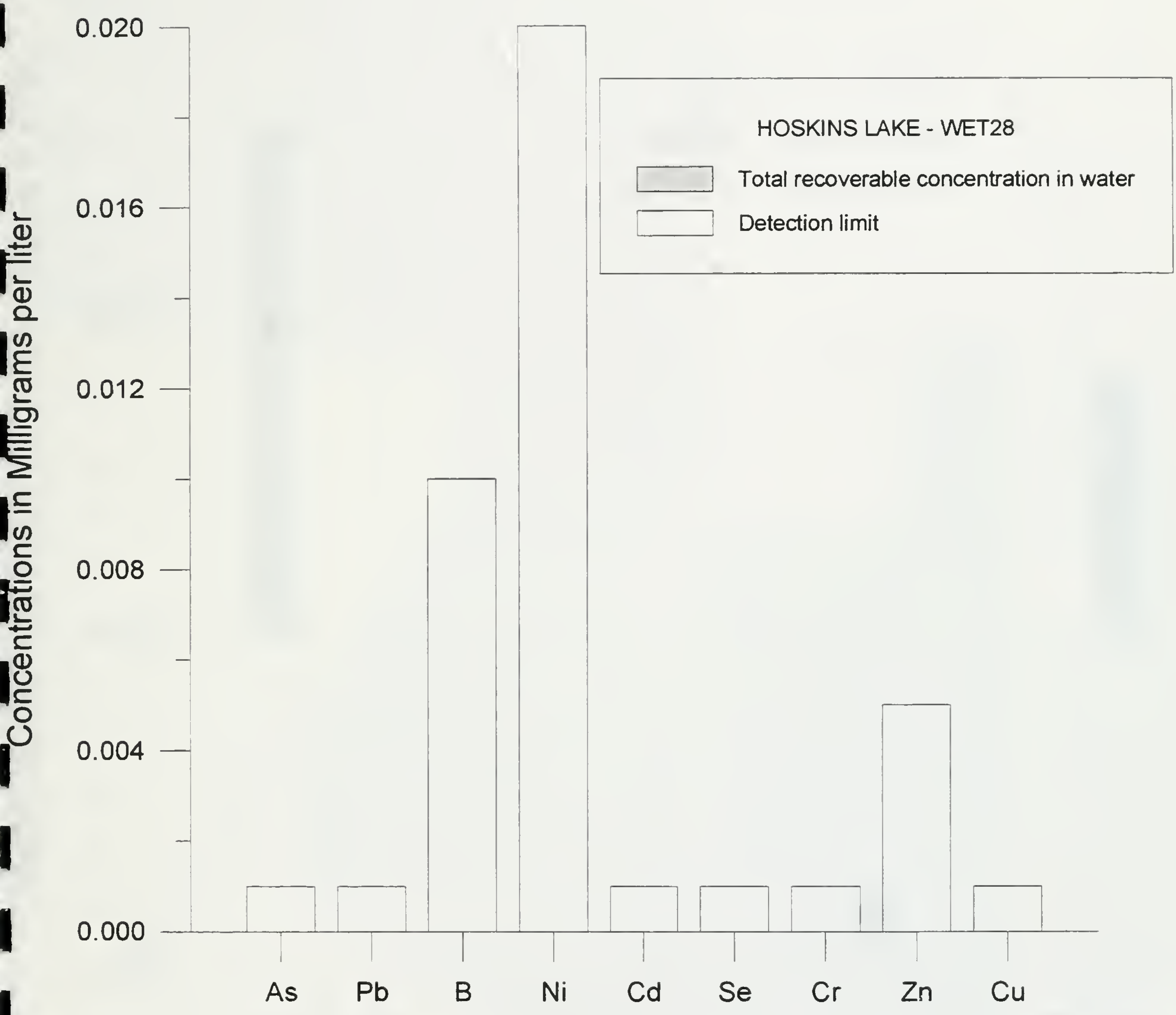
COE Hydrogeomorphic class:	DEPRESSIONAL
Primary surficial geologic unit	112DRFT
Primary bedrock geologic unit	400WLLC



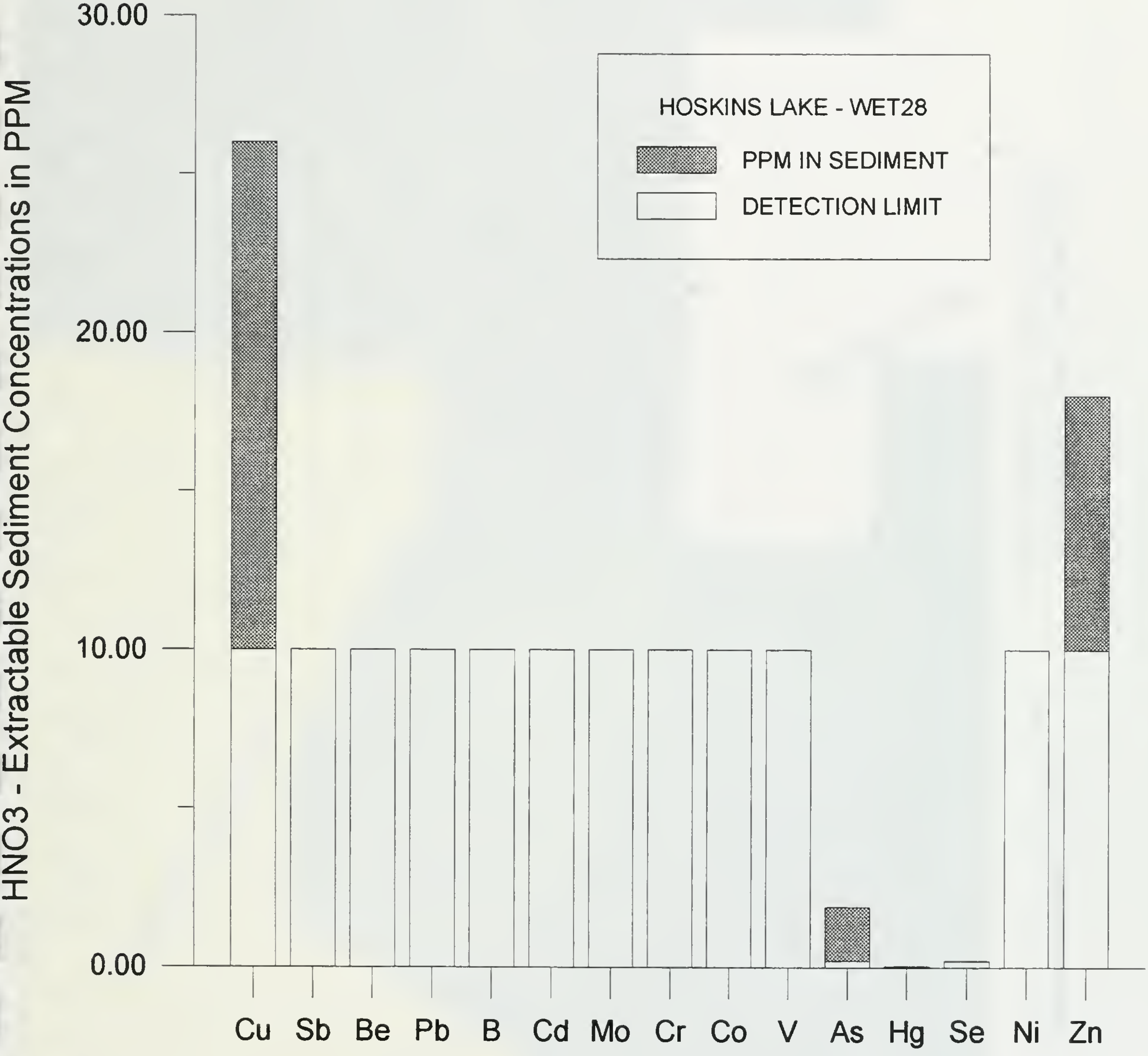
Total Annual Precipitation Near Troy
Showing Mean for Period of Record

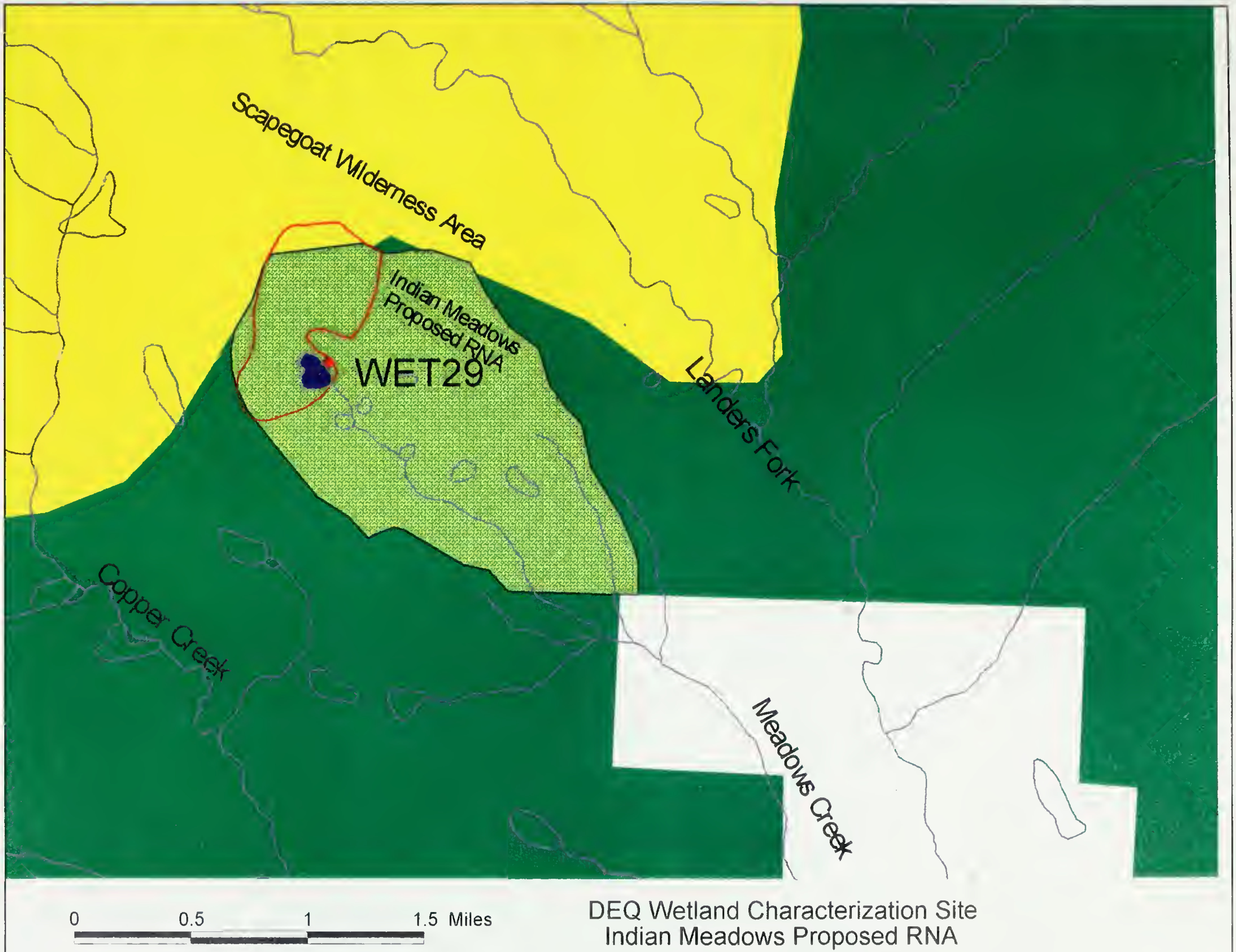


12.00
8.00
4.00
0.00
Inches Precipitation
Monthly Average, Maximum and Minimum Precipitation
Troy 18NE
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec



Concentrations in Milligrams per liter
0.020
0.016
0.012
0.008
0.004
0.000
HOSKINS LAKE - WET28
Total recoverable concentration in water
Detection limit
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
30.00
20.00
10.00
0.00
HOSKINS LAKE - WET28
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Indian Meadows Proposed RNA

Wetland: INDIAN MEADOWS PROPOSED RNA	Site Code: WET29
7.5 Minute Quad: SILVER KING MOUNTAIN	Lat: 47 6 25 Long: 112 36 45

Mean Annual Precipitation in Inches:	25.00
Mean Annual Potential Evaporation (Penman) in Inches:	28.00
'Net Precipitation' in Inches:	-3.00

Site does not have a mapped surface inlet.

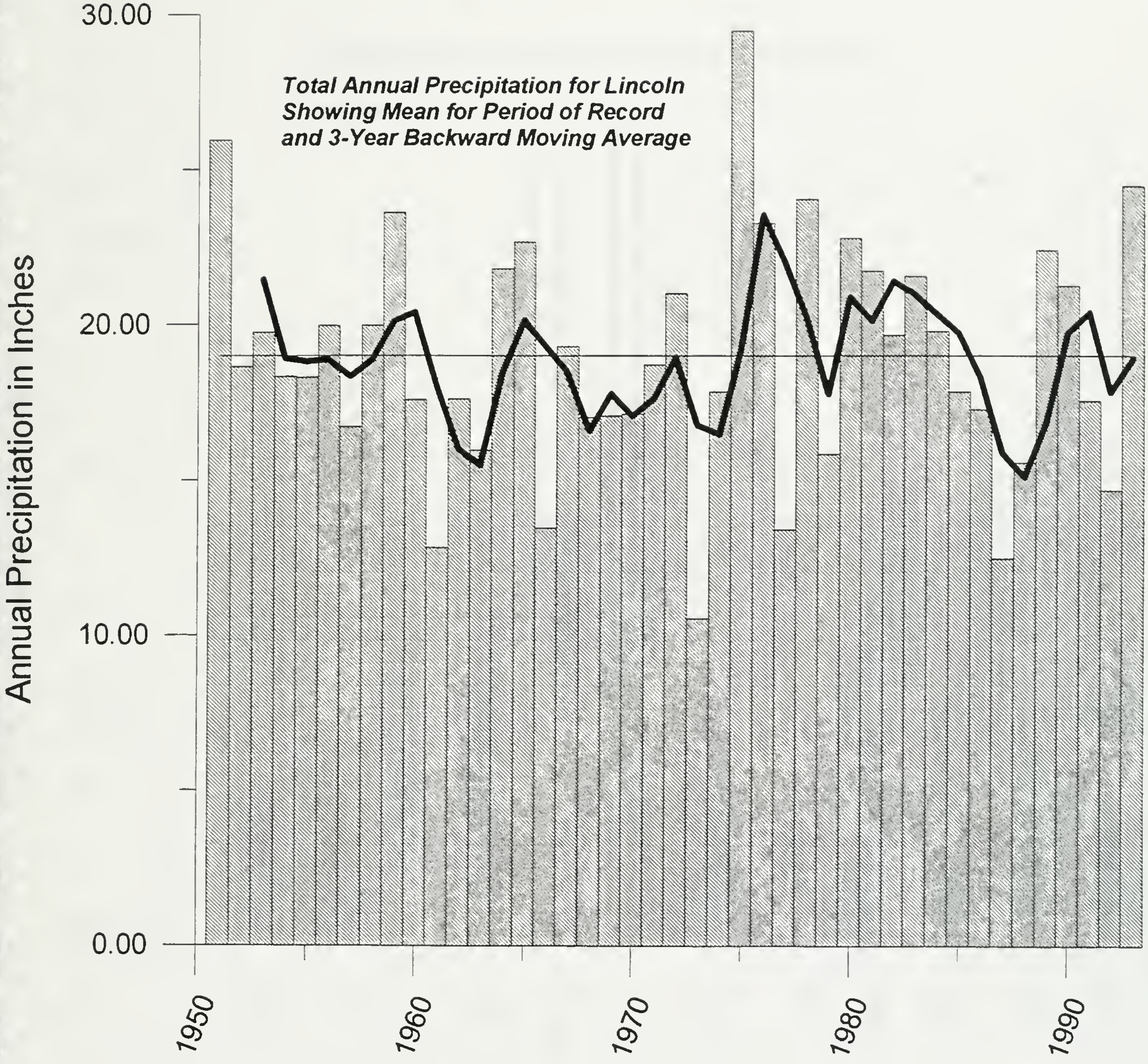
Site has a mapped surface outlet.

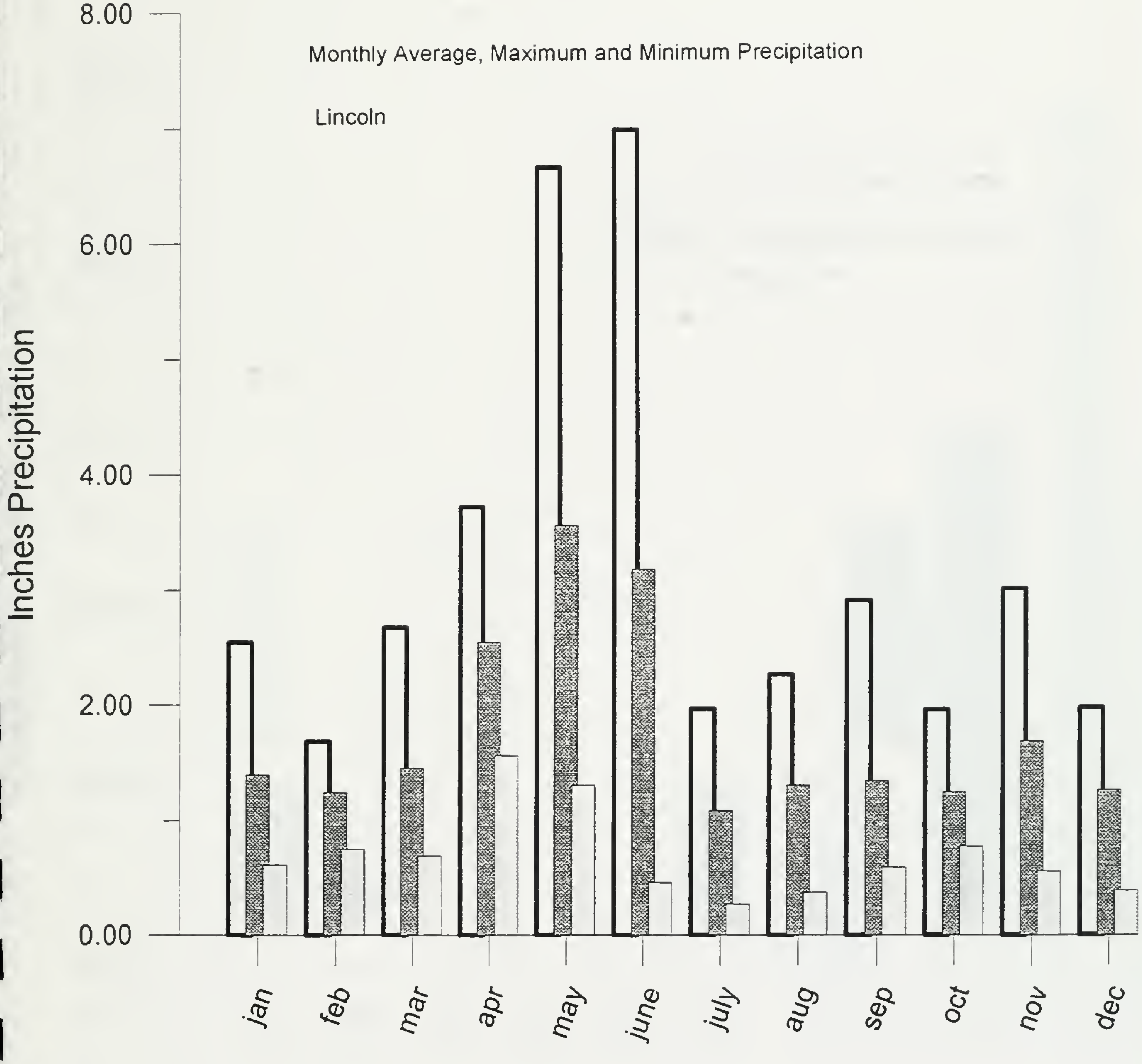
Site is not known to be artificially impounded.

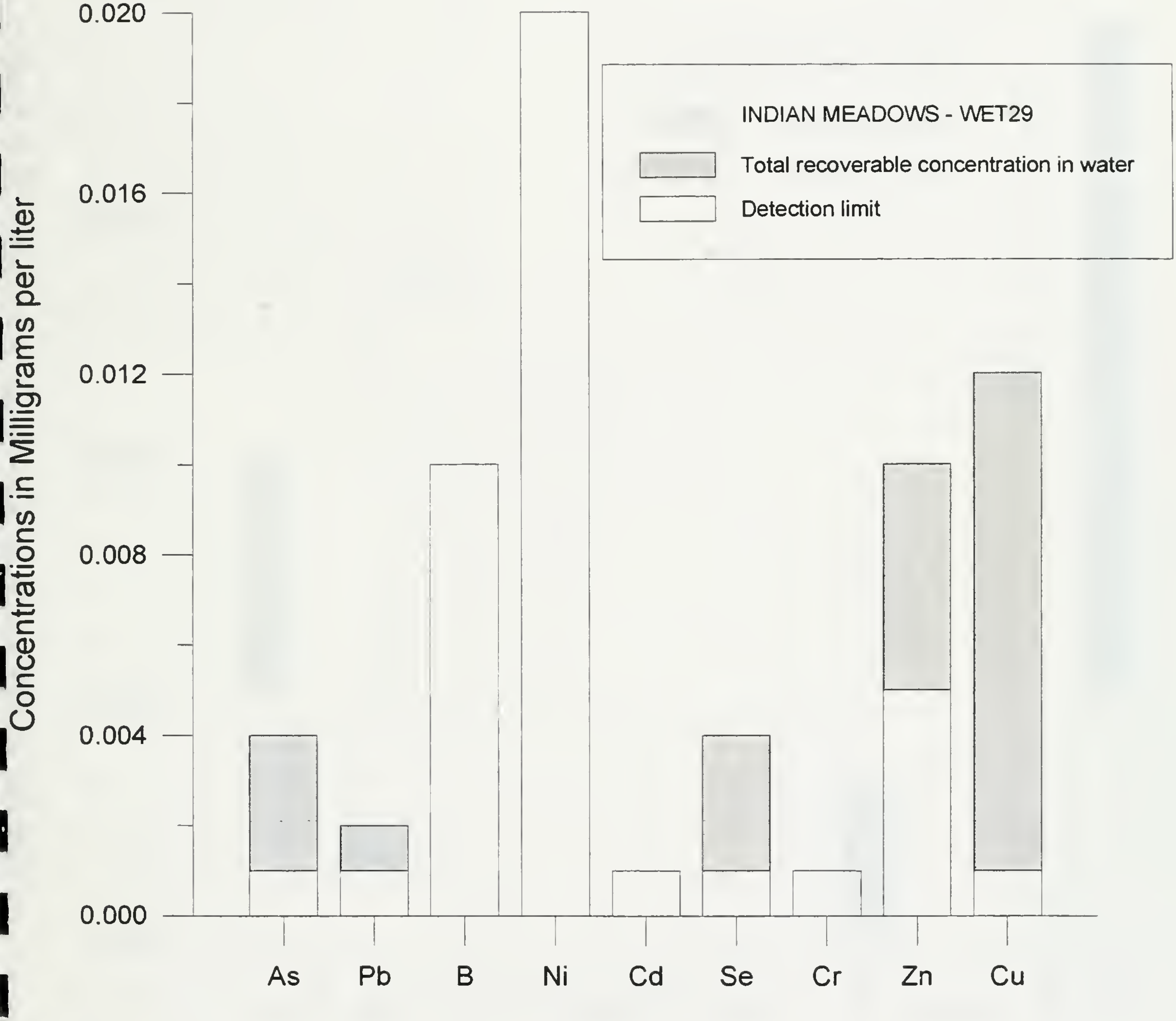
Site does not have known significant water imports.

Mapped area of wetland:	10 acres
Area of contributing drainage basin:	210 acres
Mapped elevation of wetland surface:	6035 ft
Maximum elevation within drainage basin:	6773 ft
Net relief of contributing basin:	738 ft

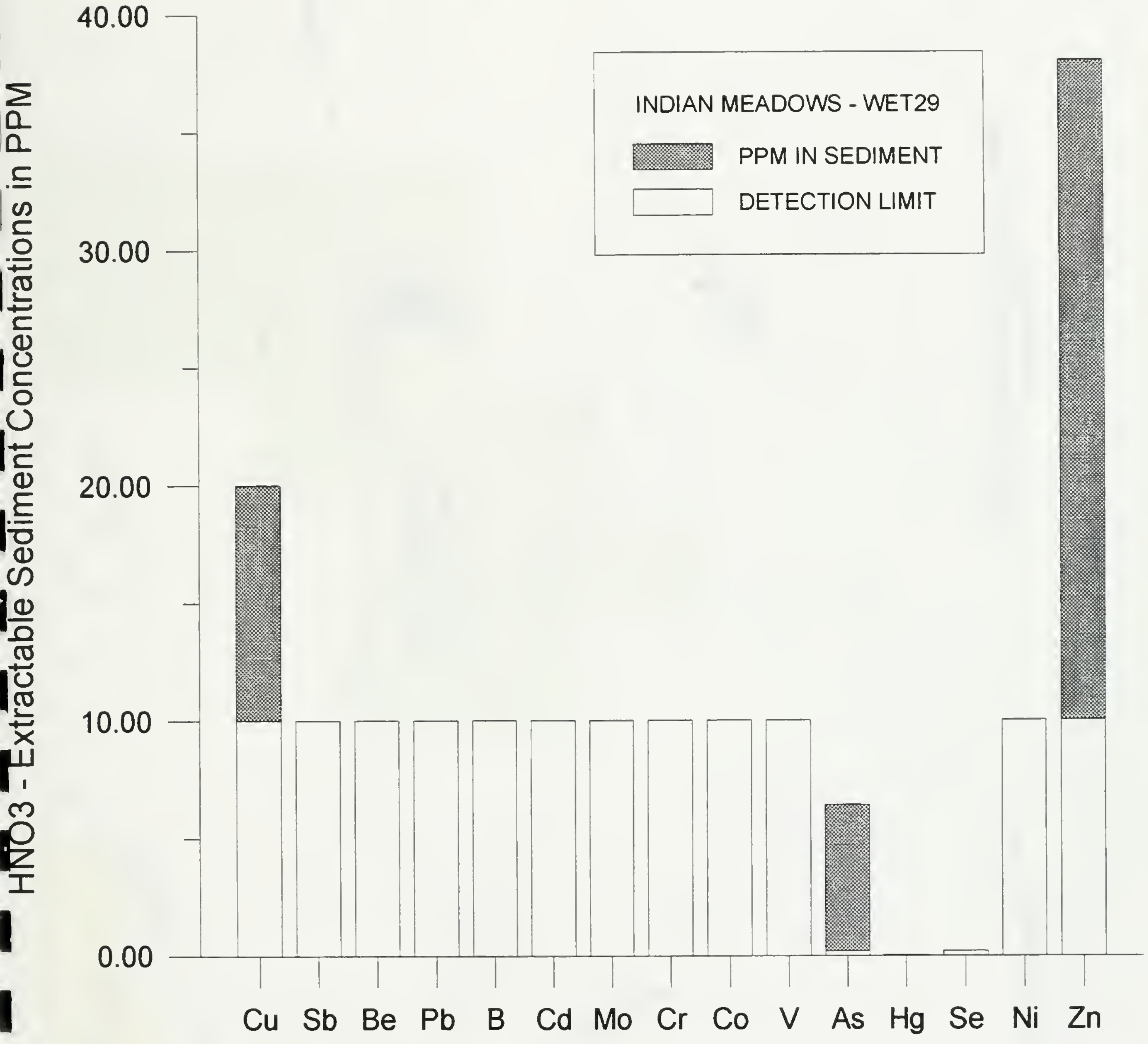
COE Hydrogeomorphic class:	DEPRESSIONAL
Primary surficial geologic unit	112DRFT
Primary bedrock geologic unit	120VLCC

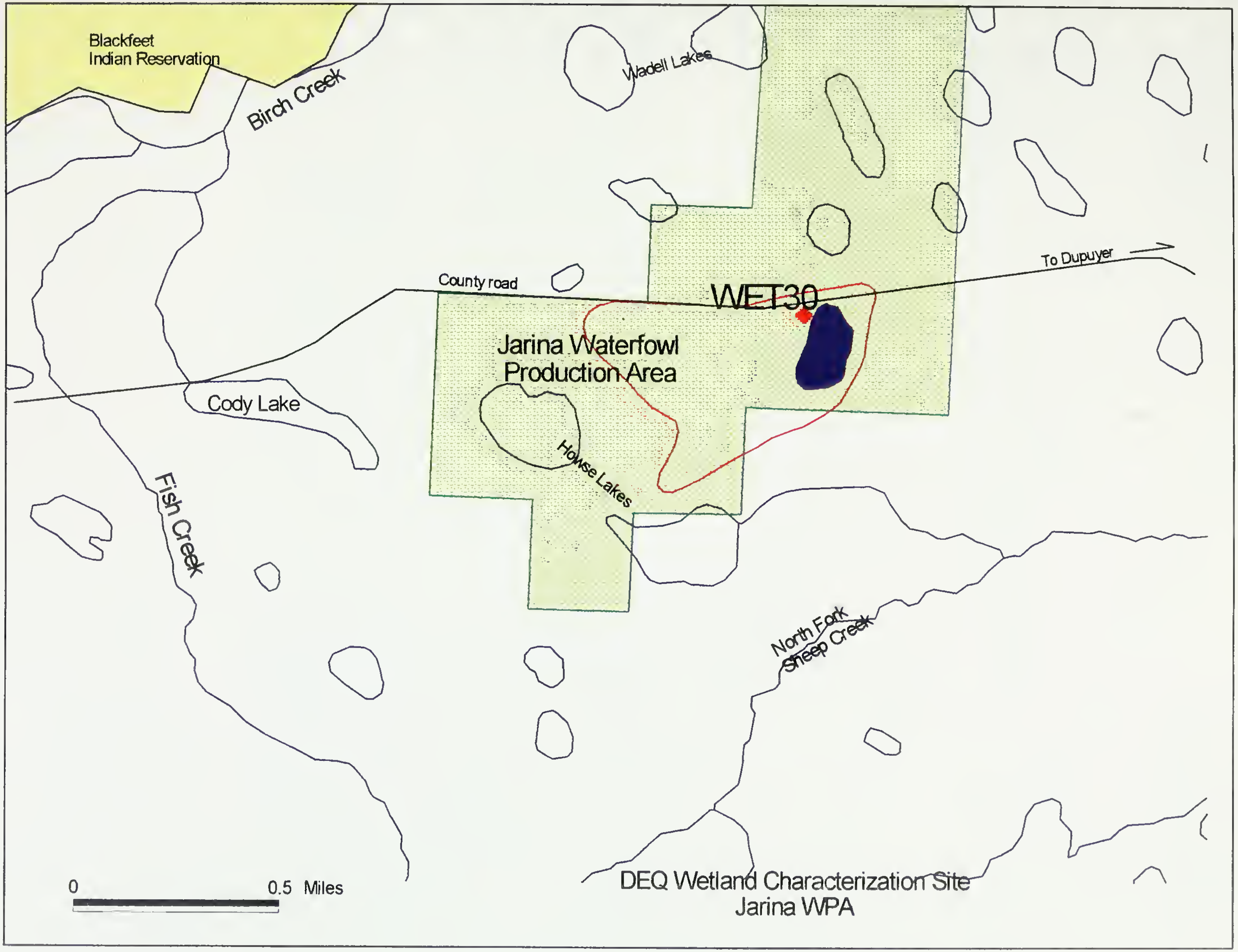

Total Annual Precipitation for Lincoln
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
30.00
20.00
10.00
0.00
1950
1960
1970
1980
1990


Monthly Average, Maximum and Minimum Precipitation
Lincoln
Inches Precipitation
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec



INDIAN MEADOWS - WET29
Total recoverable concentration in water
Detection limit
Concentrations in Milligrams per liter
0.020
0.016
0.012
0.008
0.004
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
40.00
30.00
20.00
10.00
0.00
INDIAN MEADOWS - WET29
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Jarina WPA

Wetland: JARINA WPA	Site Code: WET30
7.5 Minute Quad: FISH LAKE	Lat: 48 10 35 Long: 112 47 25

Mean Annual Precipitation in Inches:	25.00
Mean Annual Potential Evaporation (Penman) in Inches:	34.00
'Net Precipitation' in Inches:	-9.00

Site does not have a mapped surface inlet.

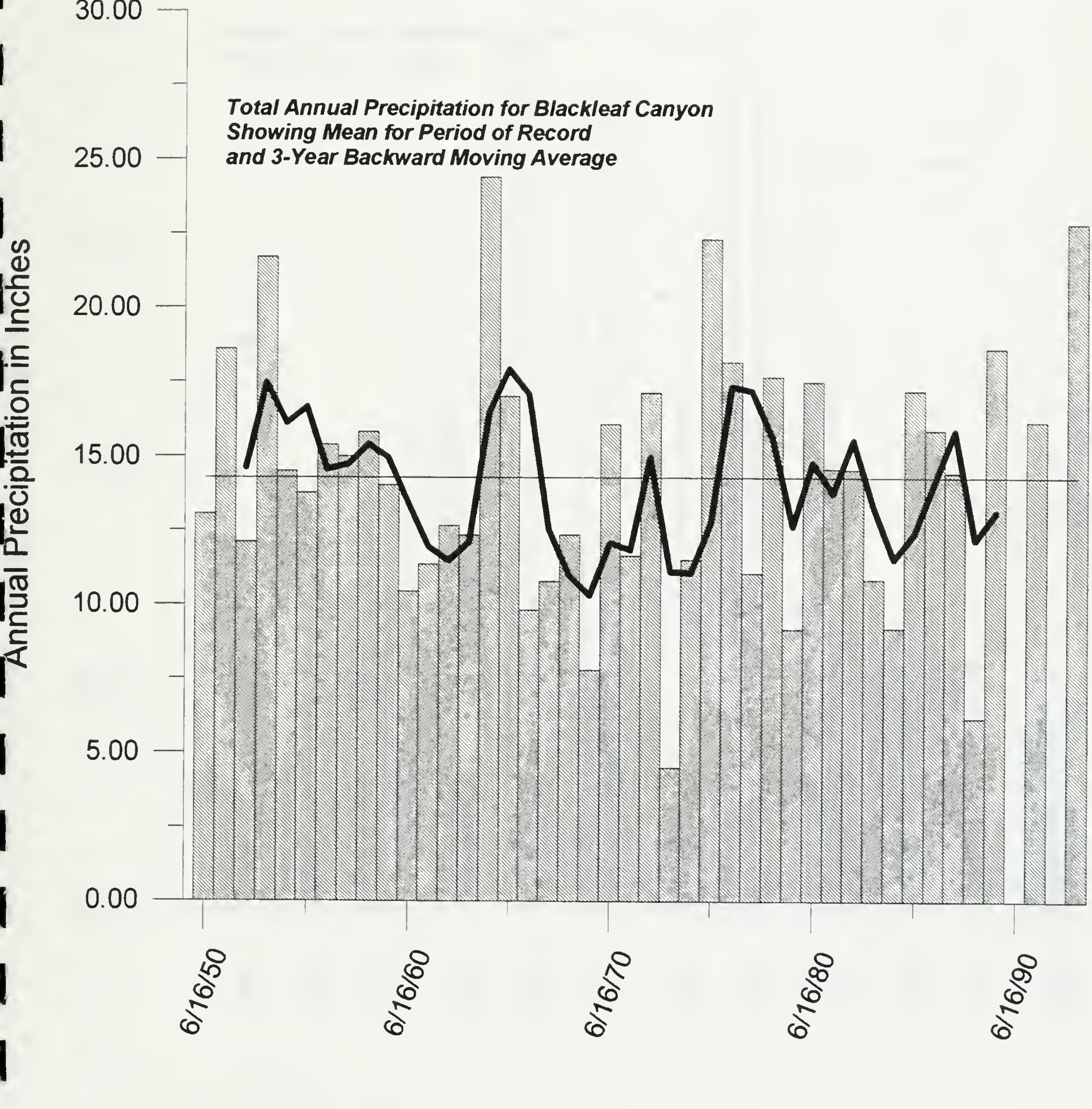
Site does not have a mapped surface outlet.

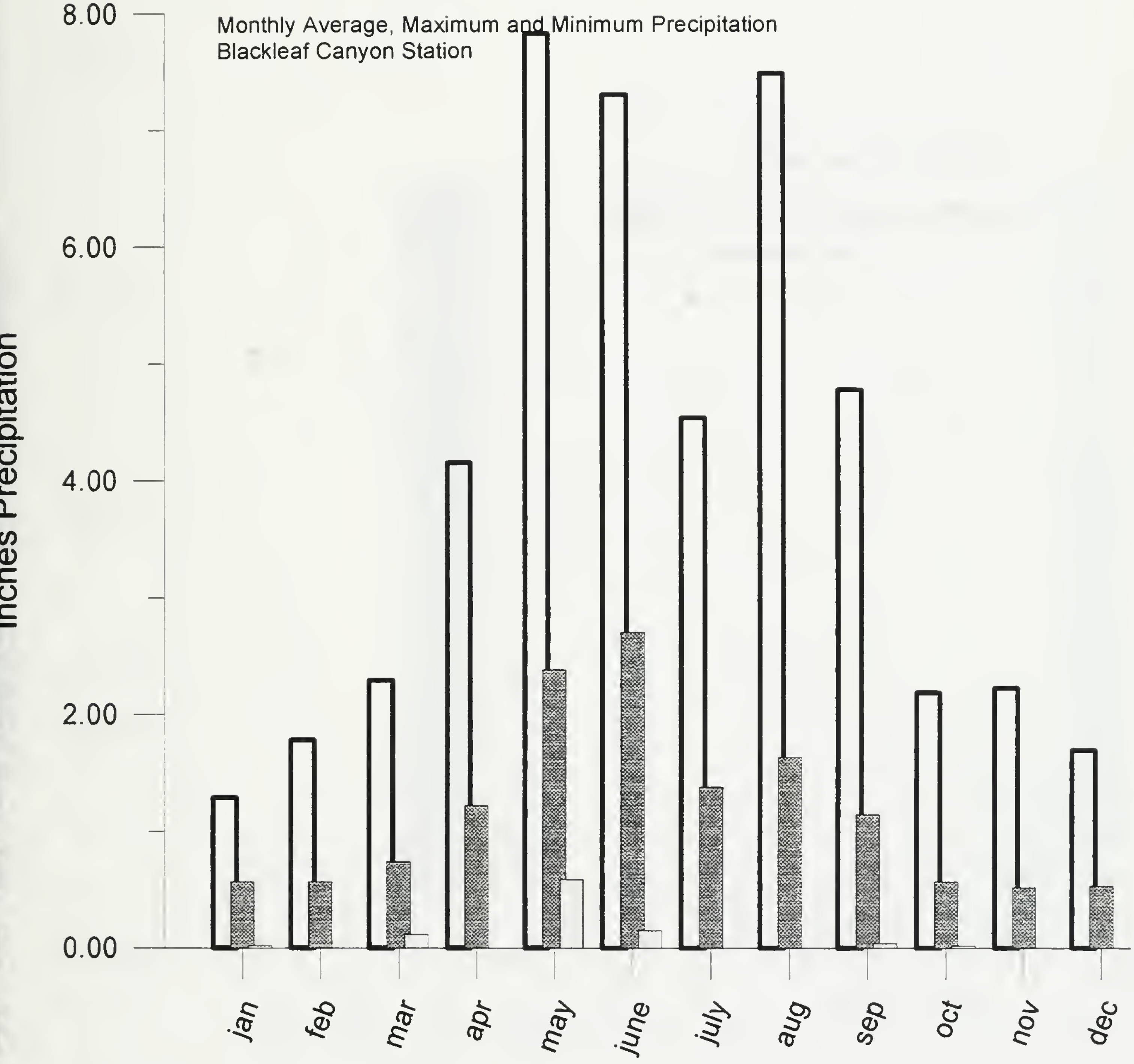
Site is not known to be artificially impounded.

Site does not have known significant water imports.

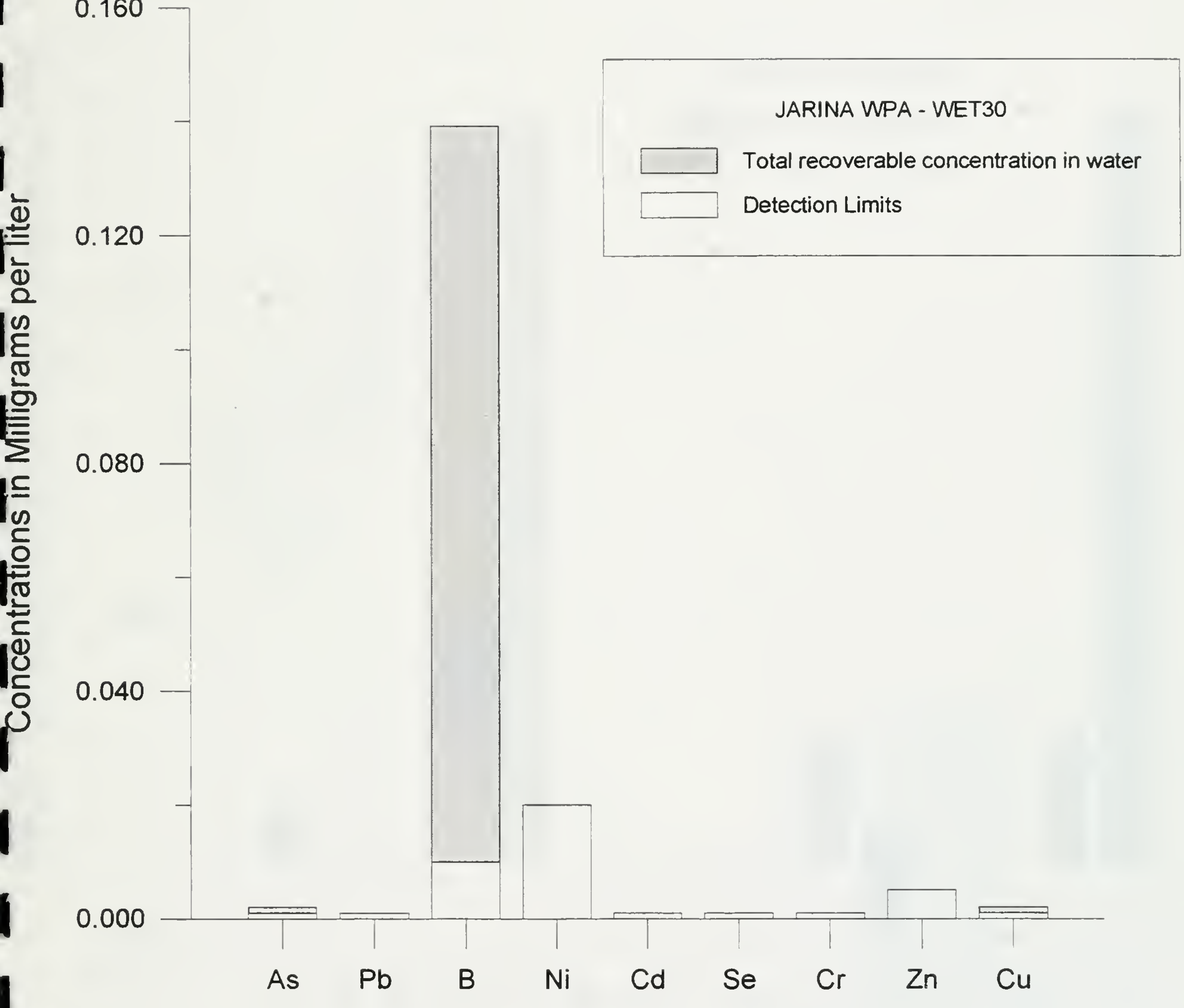
Mapped area of wetland:	12 acres
Area of contributing drainage basin:	130 acres
Mapped elevation of wetland surface:	4675 ft
Maximum elevation within drainage basin:	4765 ft
Net relief of contributing basin:	90 ft

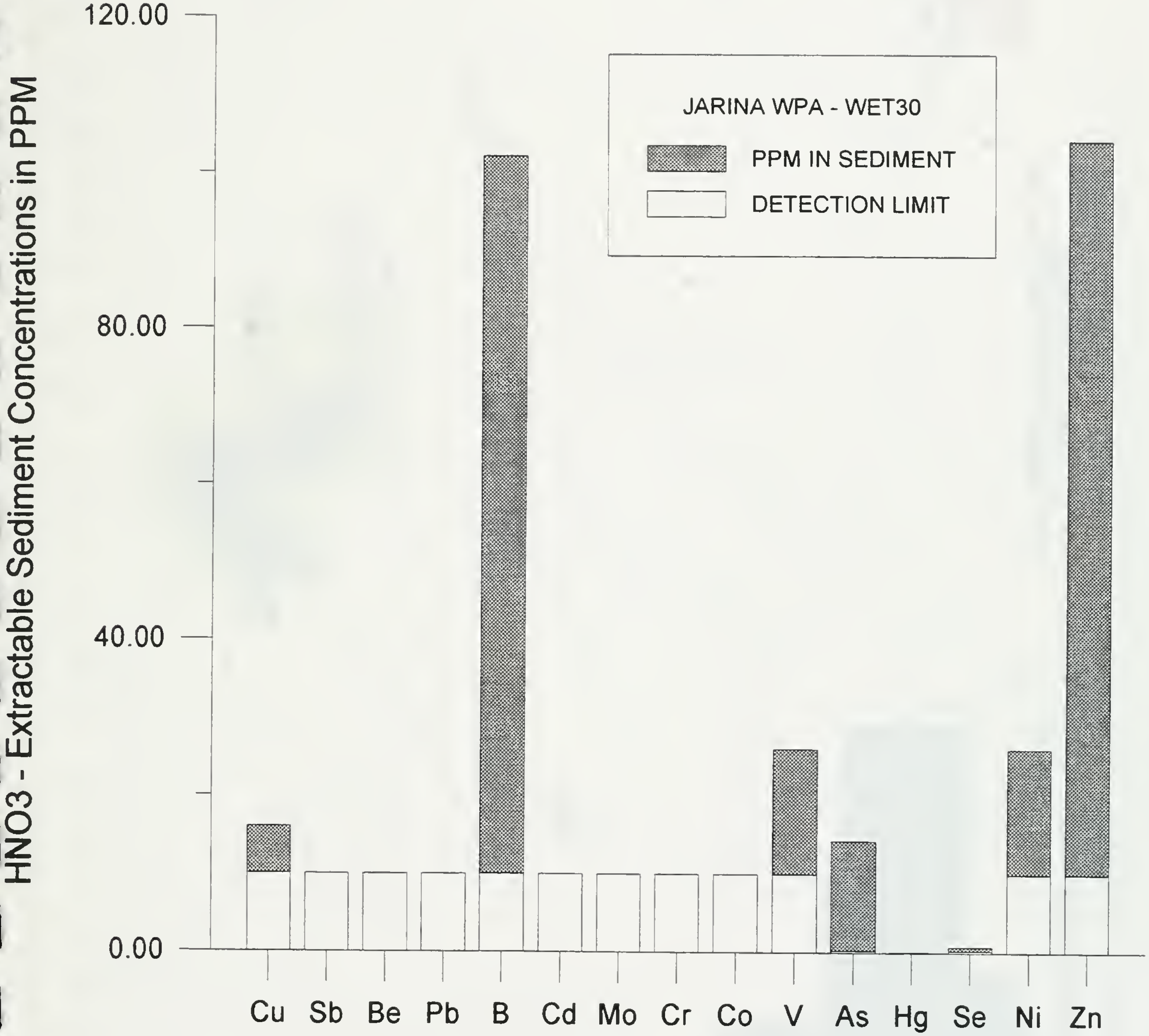
COE Hydrogeomorphic class:	FRINGE
Primary surficial geologic unit	112TILL
Primary bedrock geologic unit	210CRCS

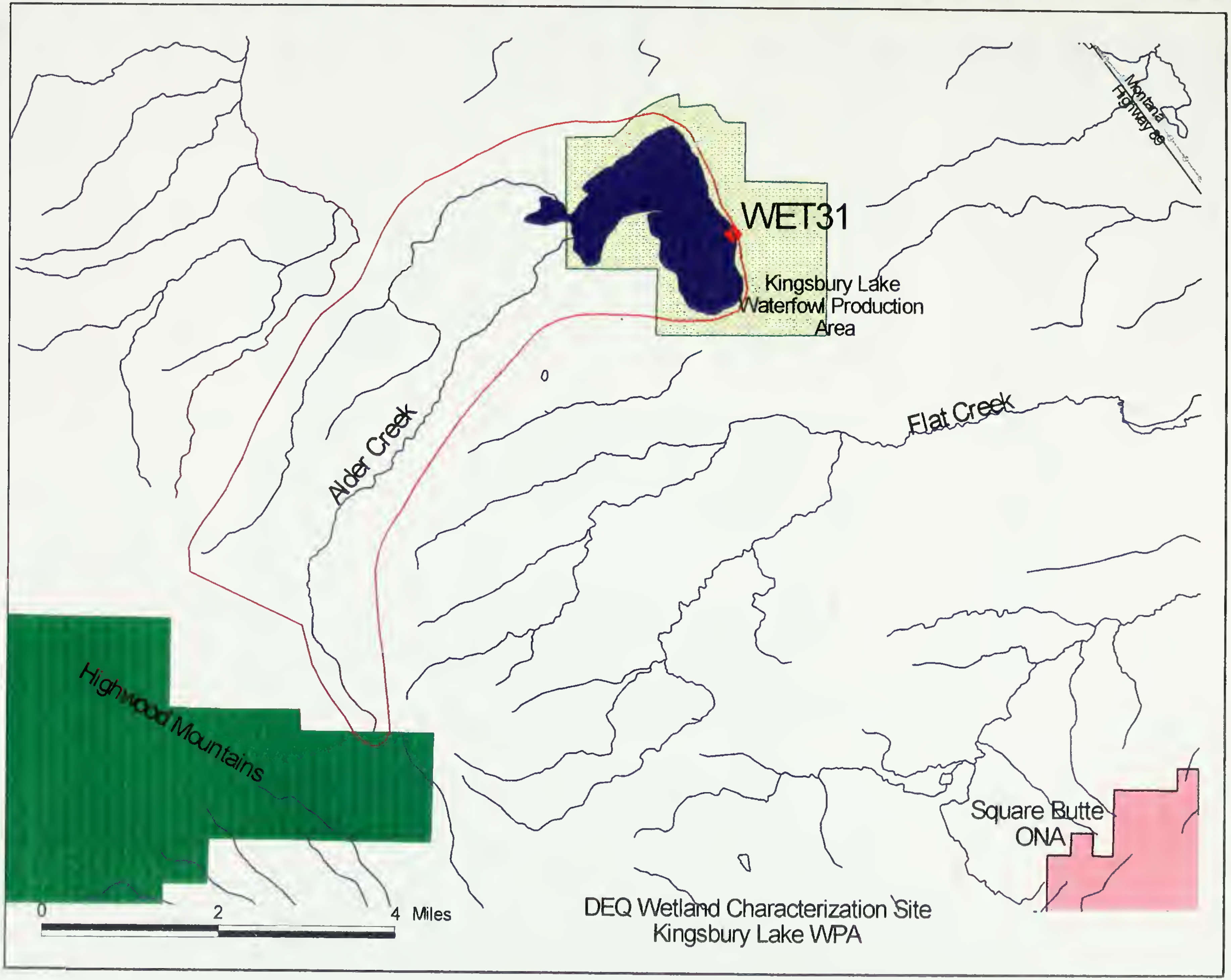




Monthly Average, Maximum and Minimum Precipitation
Blackleaf Canyon Station
Inches Precipitation
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec


JARINA WPA - WET30
Total recoverable concentration in water
Detection Limits
Concentrations in Milligrams per liter
0.160
0.120
0.080
0.040
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
120.00
80.00
40.00
0.00
JARINA WPA - WET30
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn


DEQ Wetland Characterization Site
Kingsbury Lake WPA

Wetland: KINGSBURY WPA

Site Code: WET31

7.5 Minute Quad: GERALDINE

Lat: 47 34 0
Long: 110 20 45

Mean Annual Precipitation in Inches: 17.00

Mean Annual Potential Evaporation (Penman) in Inches: 41.00

'Net Precipitation' in Inches: -24.00

Site has a mapped surface inlet.

Site does not have a mapped surface outlet.

Site is not known to be artificially impounded.

Site does not have known significant water imports.

Mapped area of wetland: 1375 acres

Area of contributing drainage basin: 10420 acres

Mapped elevation of wetland surface: 3182 ft

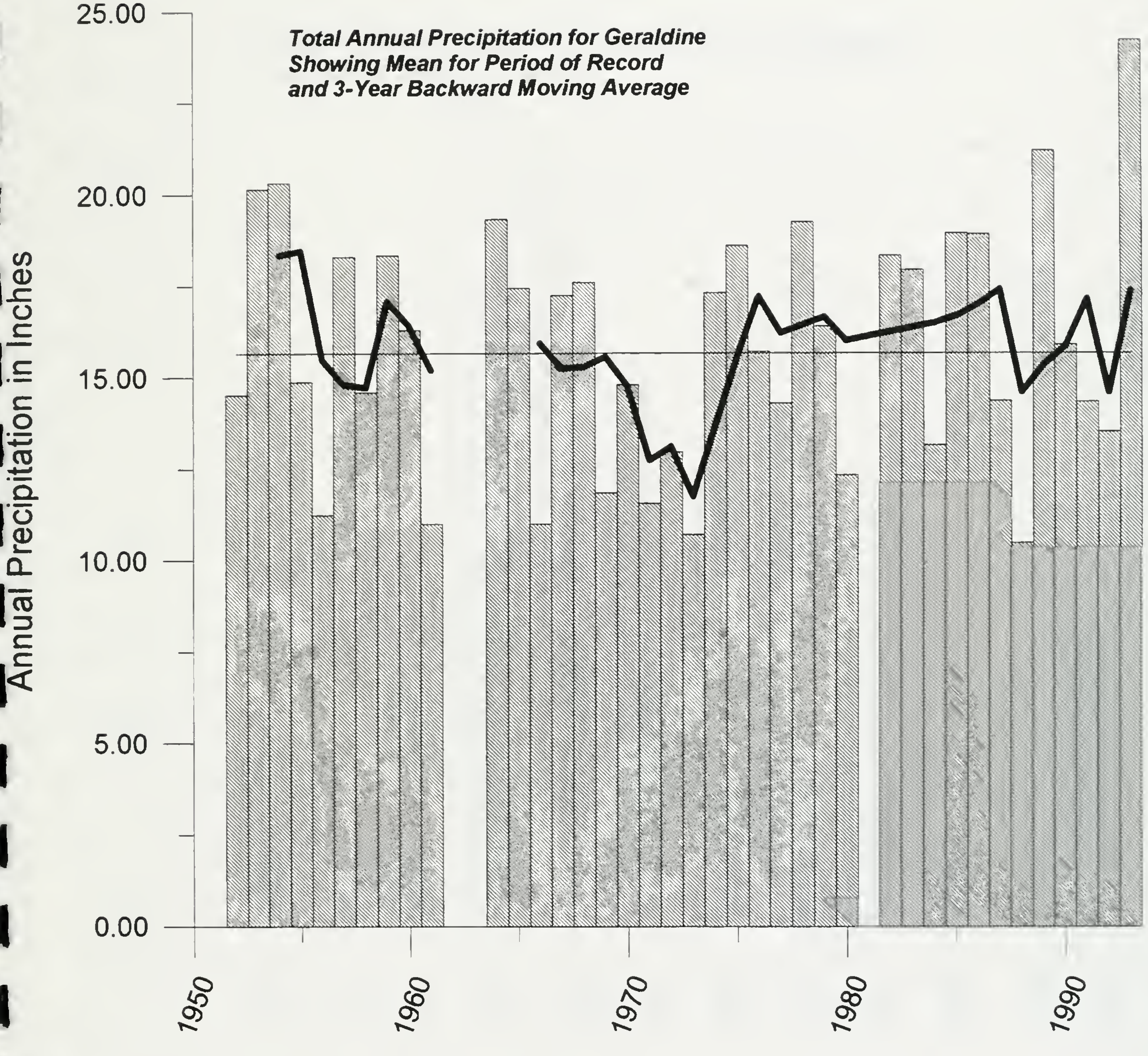
Maximum elevation within drainage basin: 6034 ft

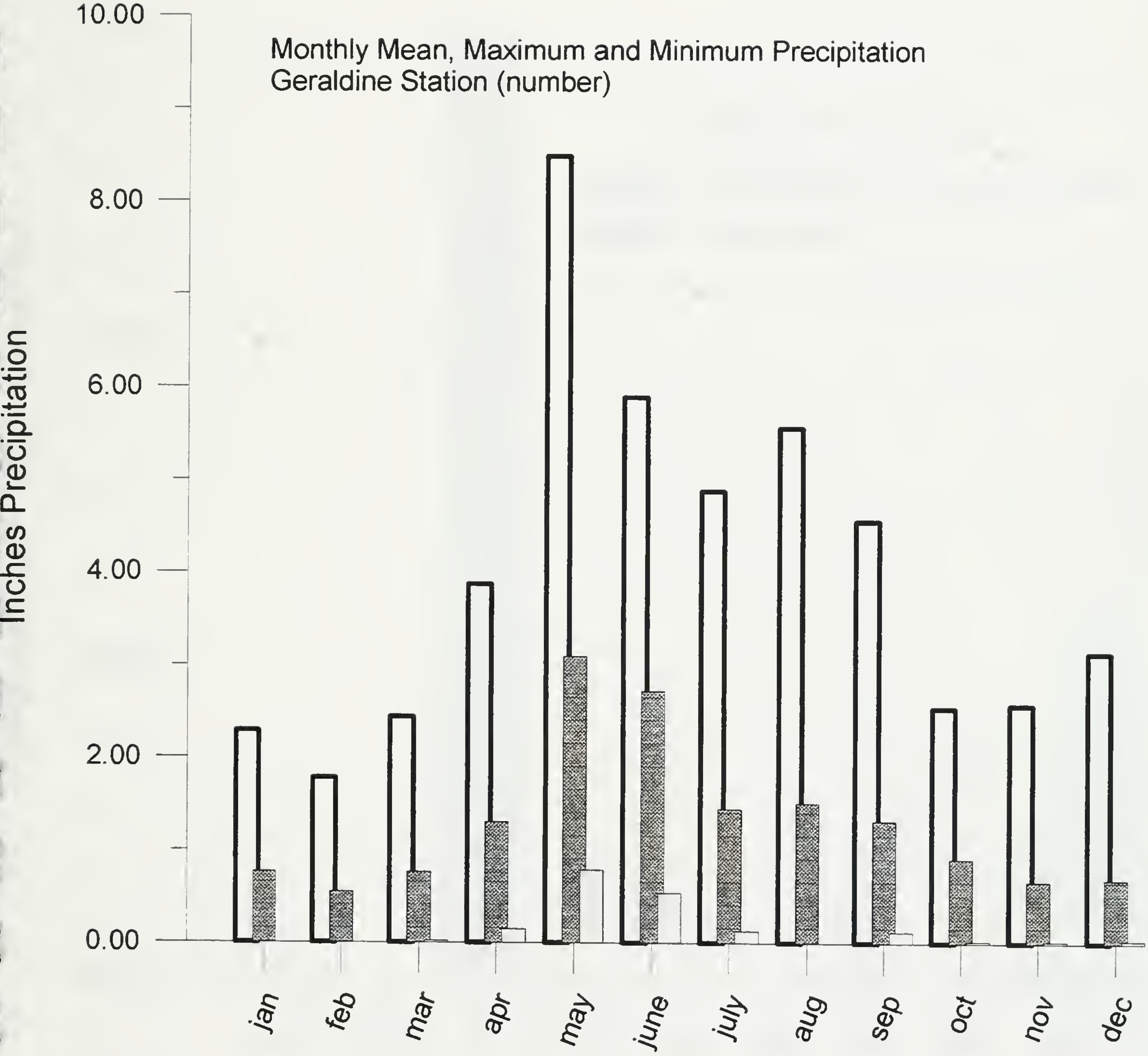
Net relief of contributing basin: 2852 ft

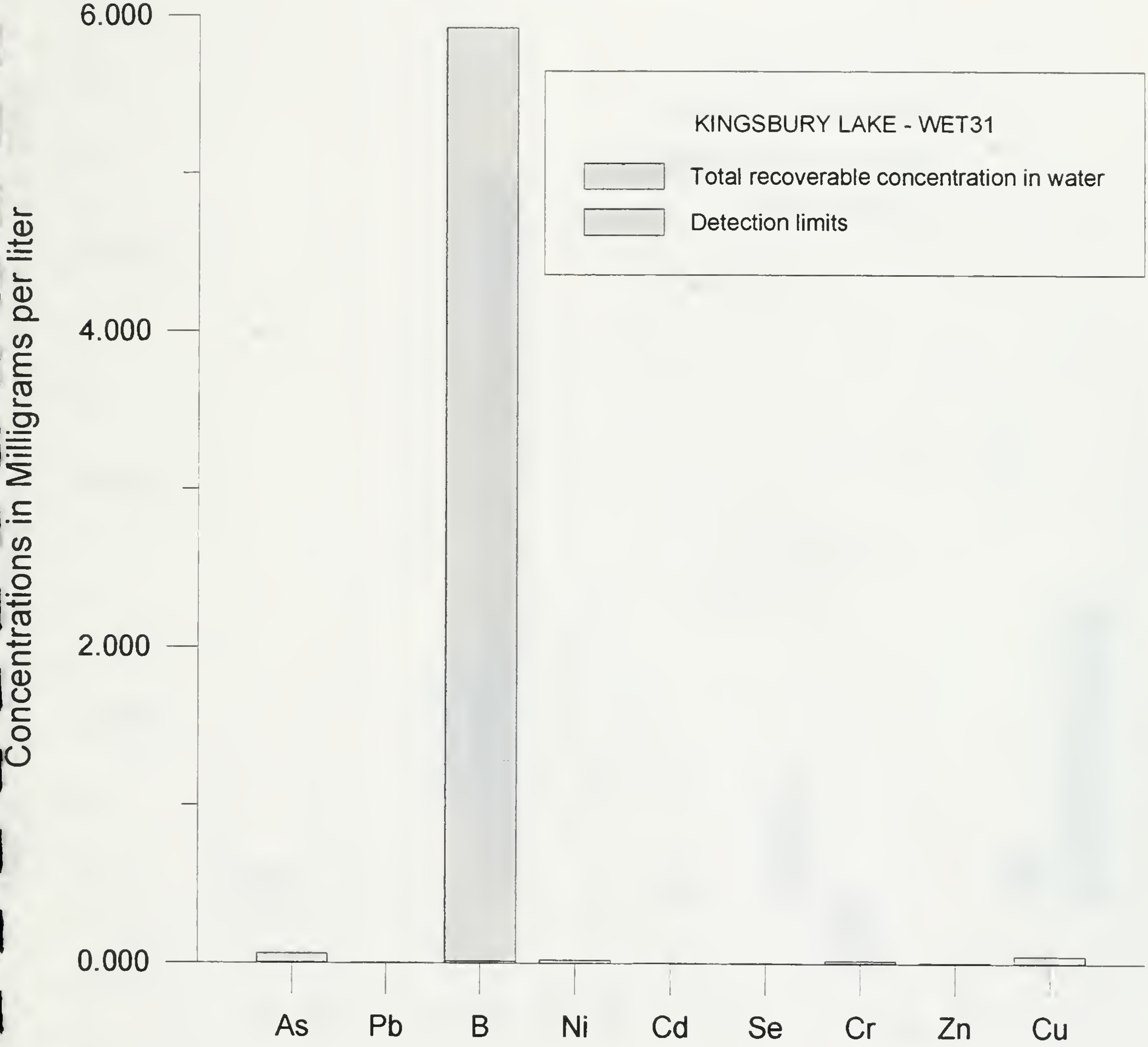
COE Hydrogeomorphic class: FRINGE

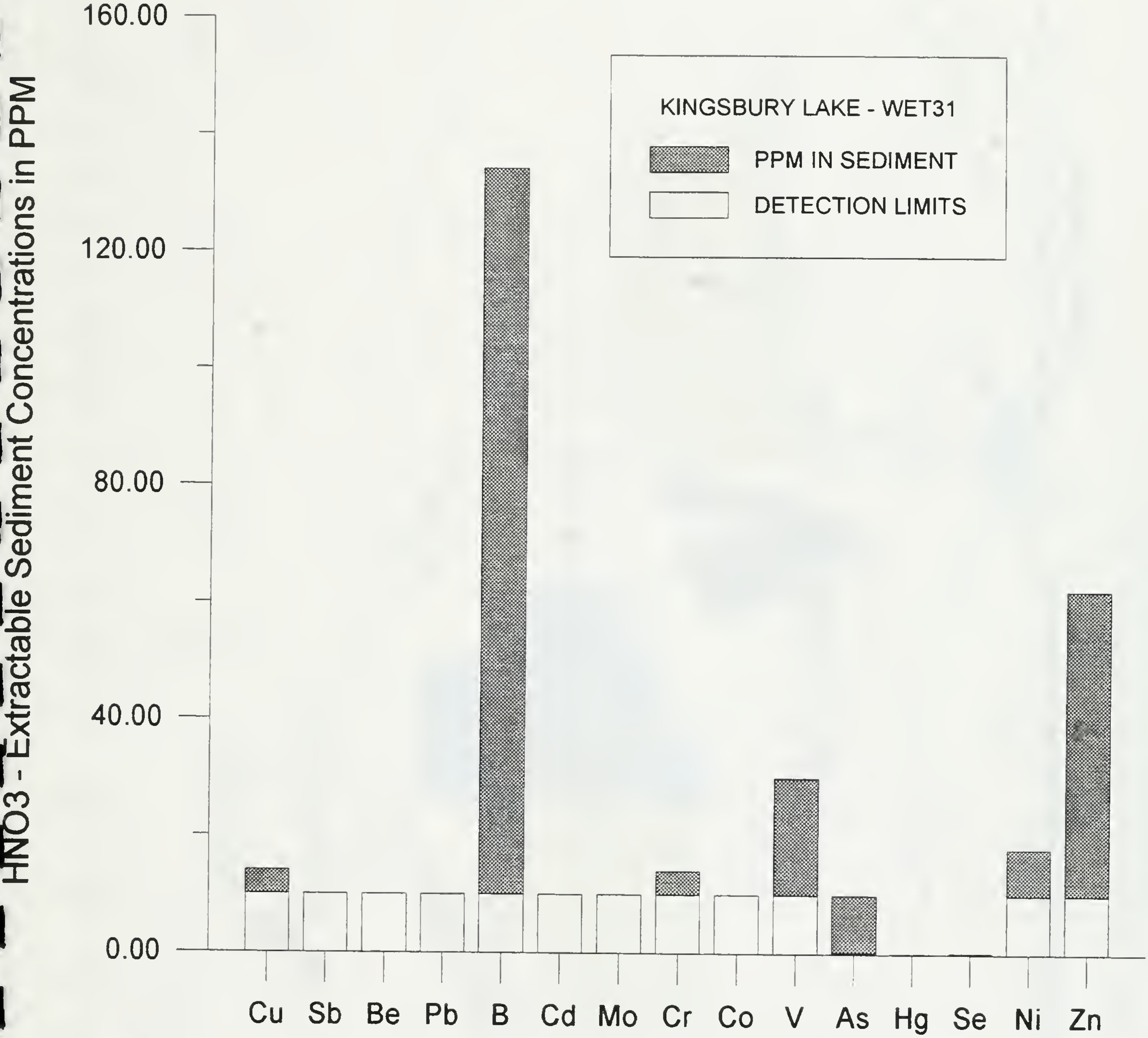
Primary surficial geologic unit 110"LAC"

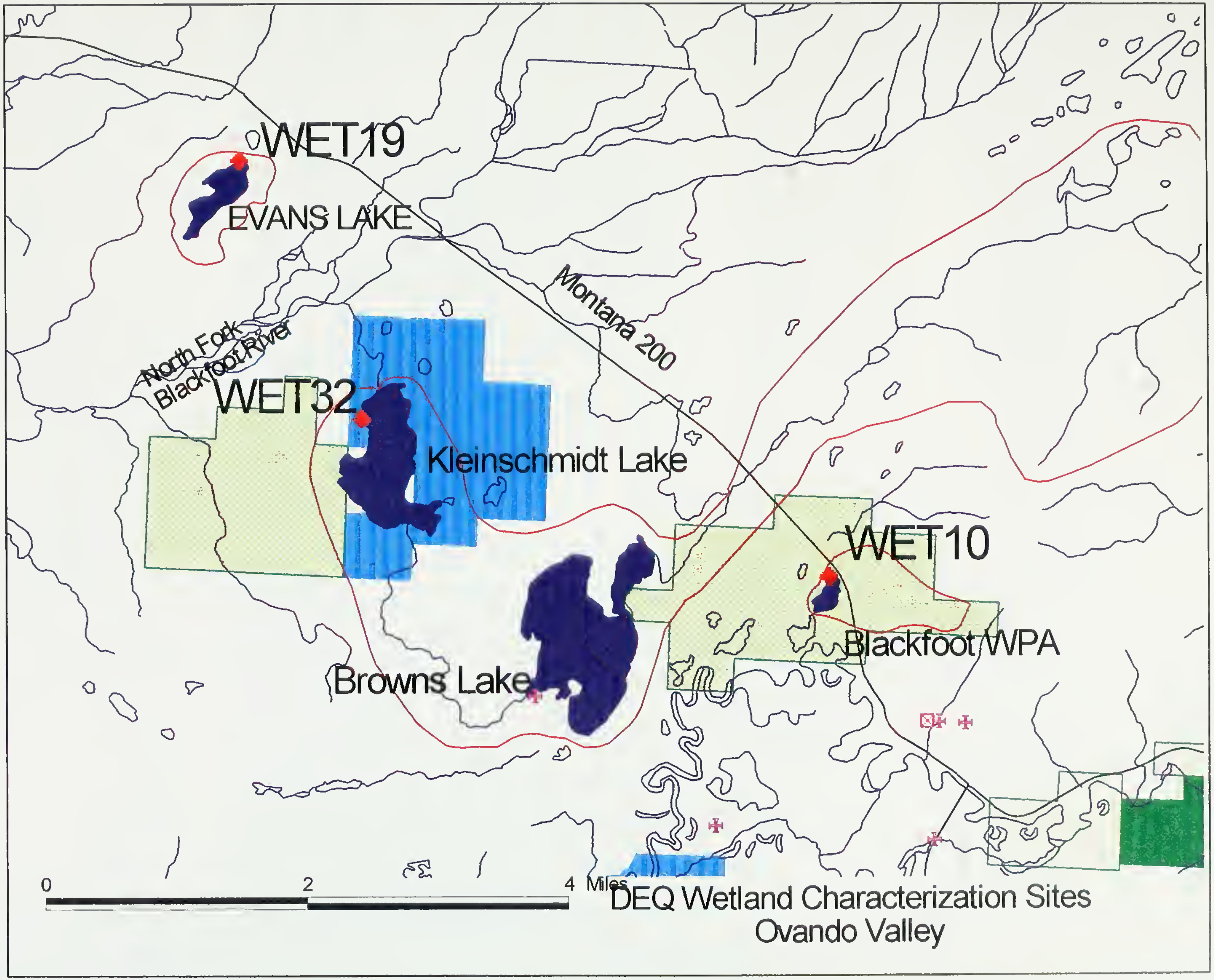
Primary bedrock geologic unit 211CLRD


Total Annual Precipitation for Geraldine
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1950
1960
1970
1980
1990


Monthly Mean, Maximum and Minimum Precipitation
Geraldine Station (number)
Inches Precipitation
10.00
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec


KINGSBURY LAKE - WET31
▨ Total recoverable concentration in water
▨ Detection limits
Concentrations in Milligrams per liter
6.000
4.000
2.000
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
160.00
120.00
80.00
40.00
0.00
KINGSBURY LAKE - WET31
PPM IN SEDIMENT
DETECTION LIMITS
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Sites
Ovando Valley

Wetland: KLEINSCHMIDT LAKE WPA		Site Code: WET32	
7.5 Minute Quad: BROWNS LAKE		Lat:	46 58 45
		Long:	113 2 45

Mean Annual Precipitation in Inches:	15.00
Mean Annual Potential Evaporation (Penman) in Inches:	33.00
'Net Precipitation' in Inches:	-18.00

Site has a mapped surface inlet.

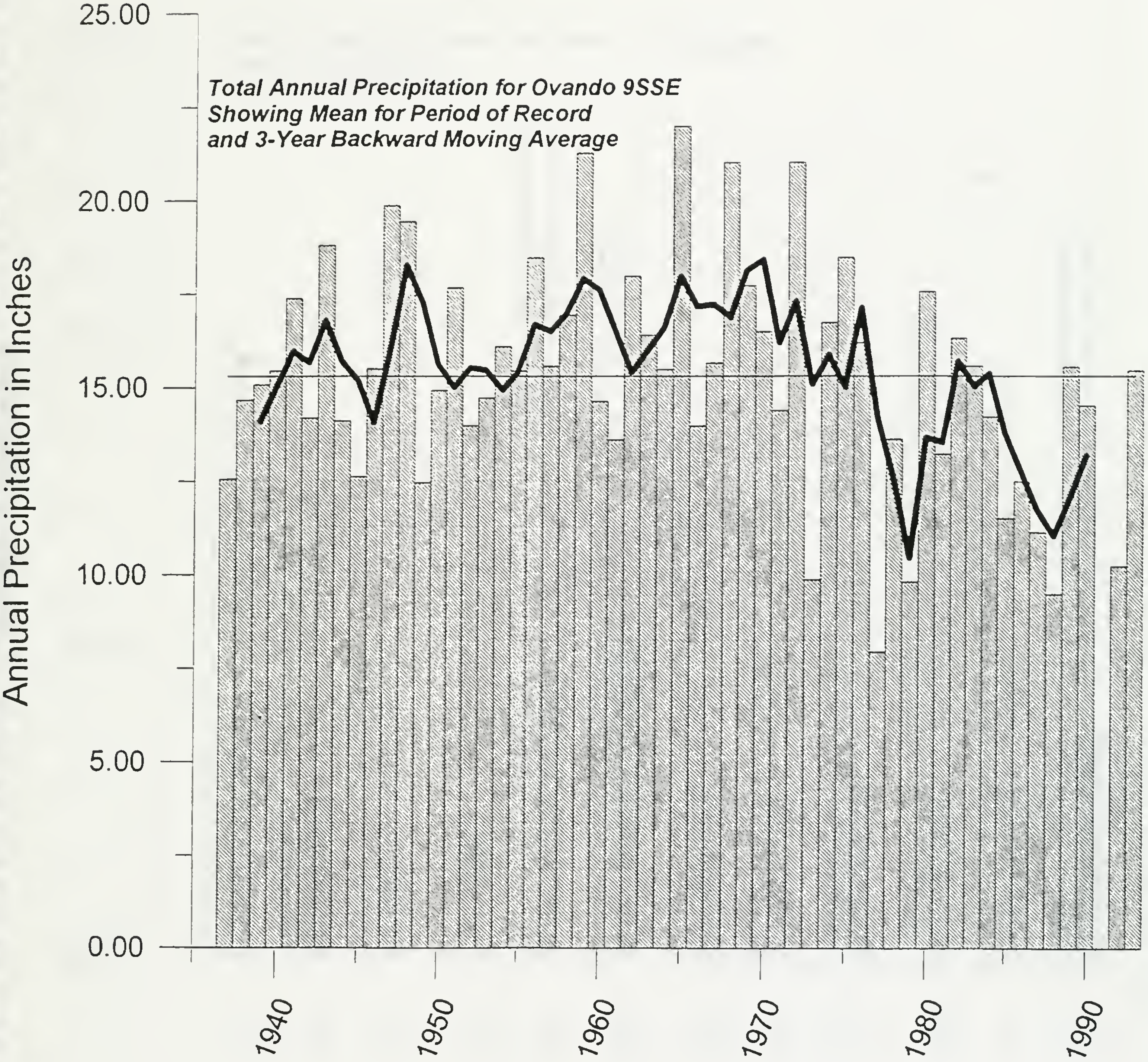
Site has a mapped surface outlet.

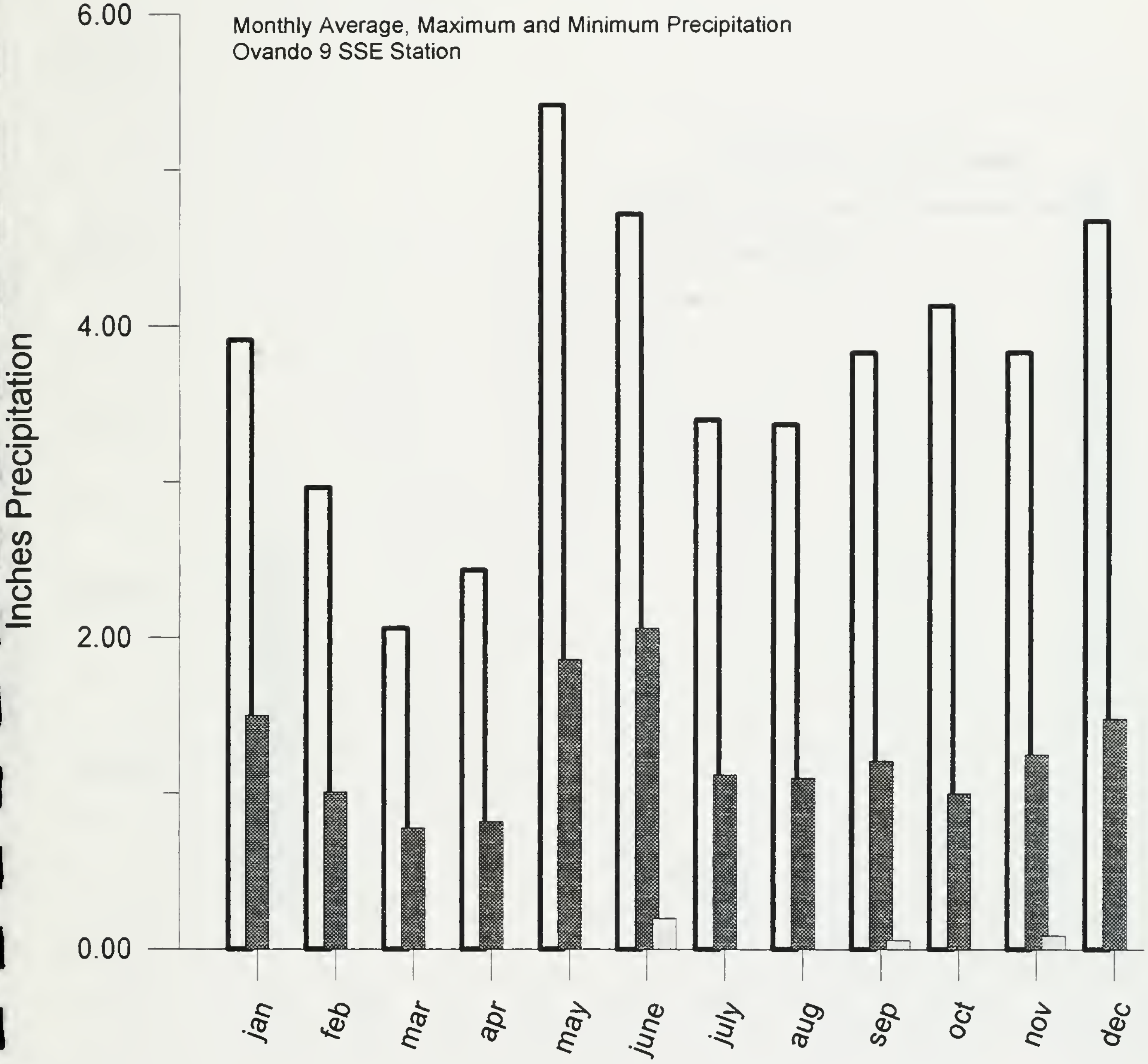
Site is artificially impounded.

Site does not have known significant water imports.

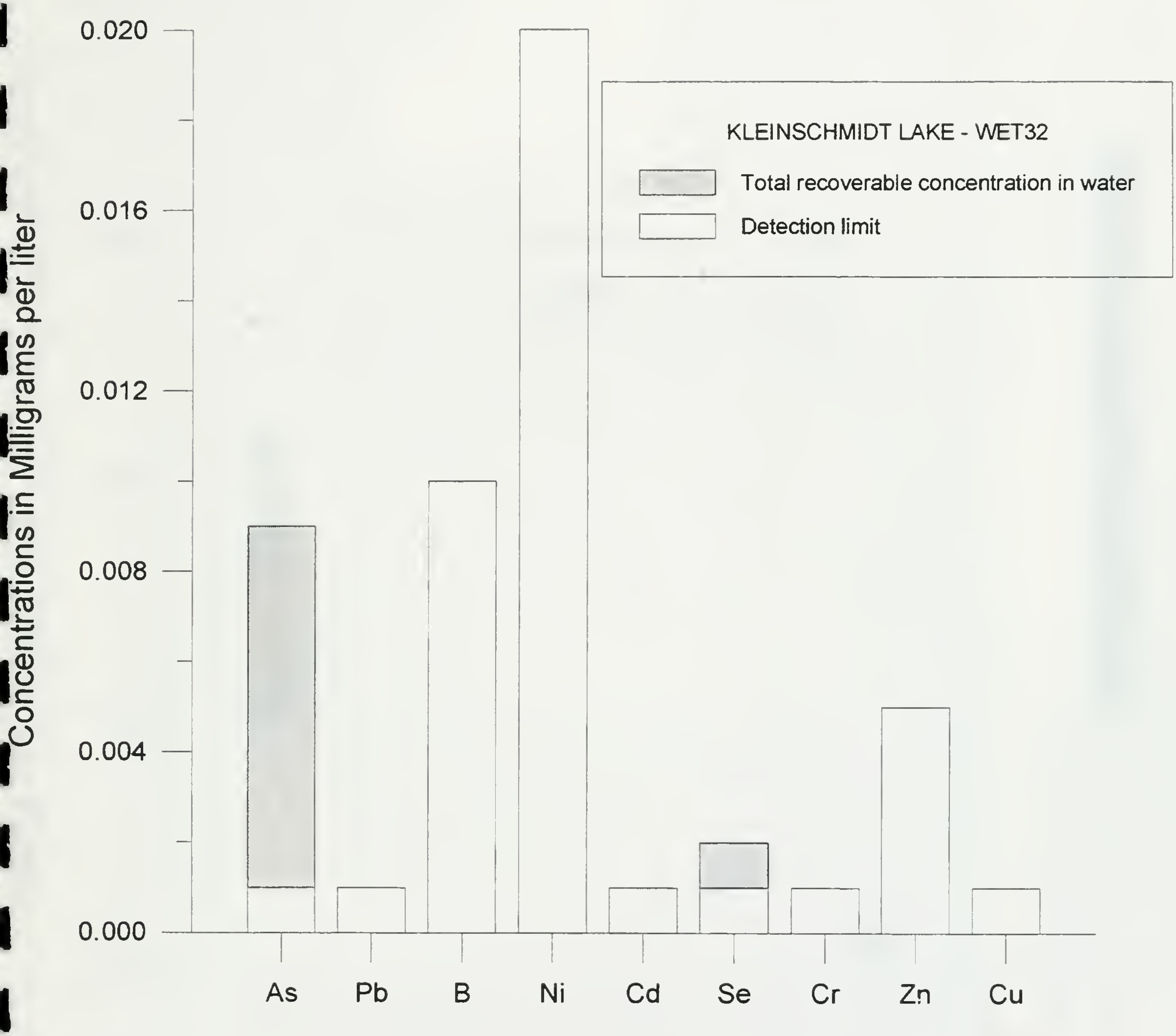
Mapped area of wetland:	285 acres
Area of contributing drainage basin:	7350 acres
Mapped elevation of wetland surface:	4182 ft
Maximum elevation within drainage basin:	7253 ft
Net relief of contributing basin:	3071 ft

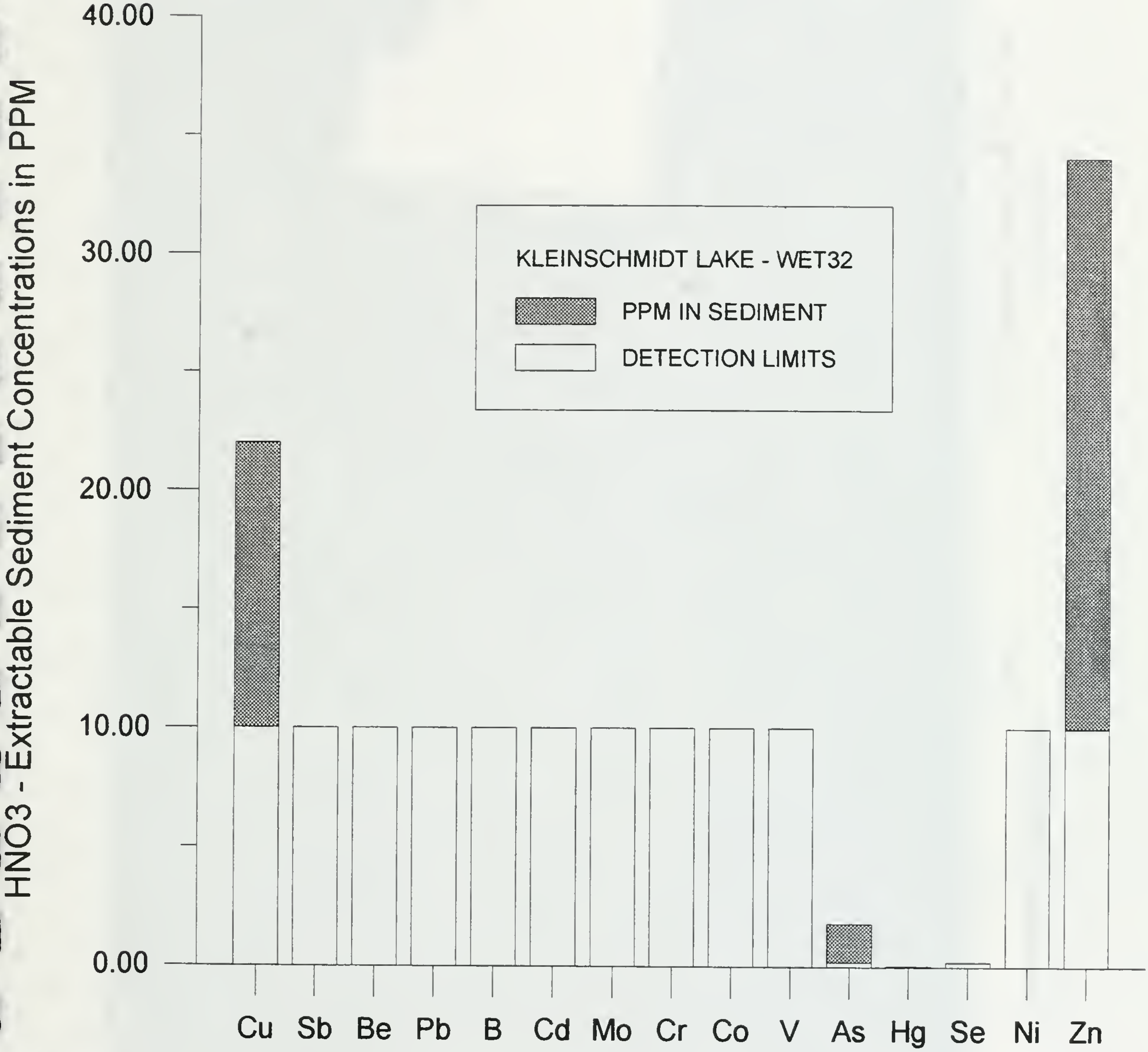
COE Hydrogeomorphic class:	FRINGE
Primary surficial geologic unit	112TILL
Primary bedrock geologic unit	120SDMS

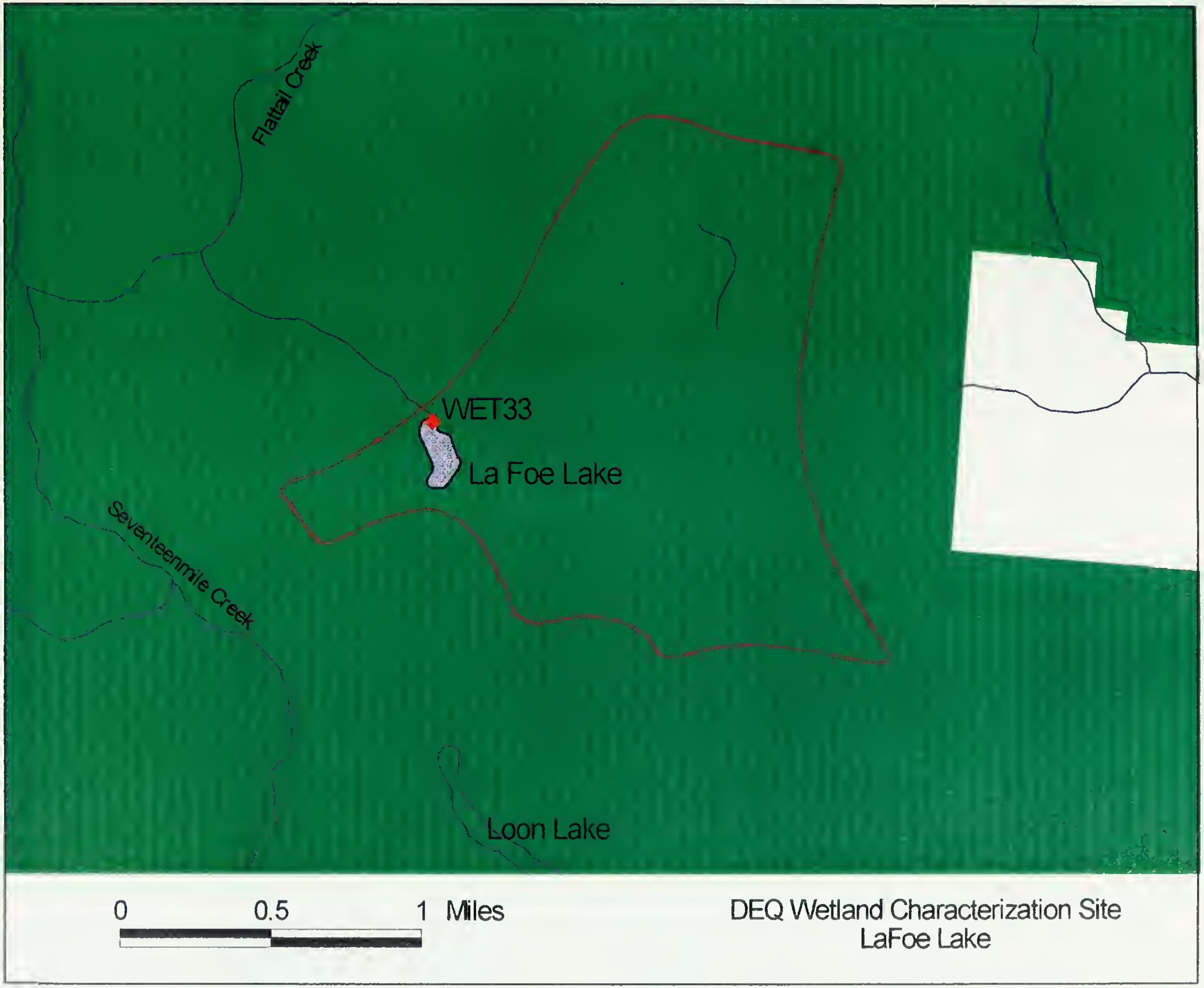

Total Annual Precipitation for Ovando 9SSE
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1940
1950
1960
1970
1980
1990



Monthly Average, Maximum and Minimum Precipitation
Ovando 9 SSE Station


Concentrations in Milligrams per liter
0.020
0.016
0.012
0.008
0.004
0.000
KLEINSCHMIDT LAKE - WET32
Total recoverable concentration in water
Detection limit
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
40.00
30.00
20.00
10.00
0.00
KLEINSCHMIDT LAKE - WET32
PPM IN SEDIMENT
DETECTION LIMITS
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
LaFoe Lake

Wetland: LAFOE LAKE

Site Code: WET33

7.5 Minute Quad: TURNER MOUNTAIN

Lat: 48 37 10
Long: 115 41 5

Mean Annual Precipitation in Inches: 35.00

Mean Annual Potential Evaporation (Penman) in Inches: 27.00

'Net Precipitation' in Inches: 8.00

Site has a mapped surface inlet.

Site has a mapped surface outlet.

Site is not known to be artificially impounded.

Site does not have known significant water imports.

Mapped area of wetland: 11 acres

Area of contributing drainage basin: 1230 acres

Mapped elevation of wetland surface: 3800 ft

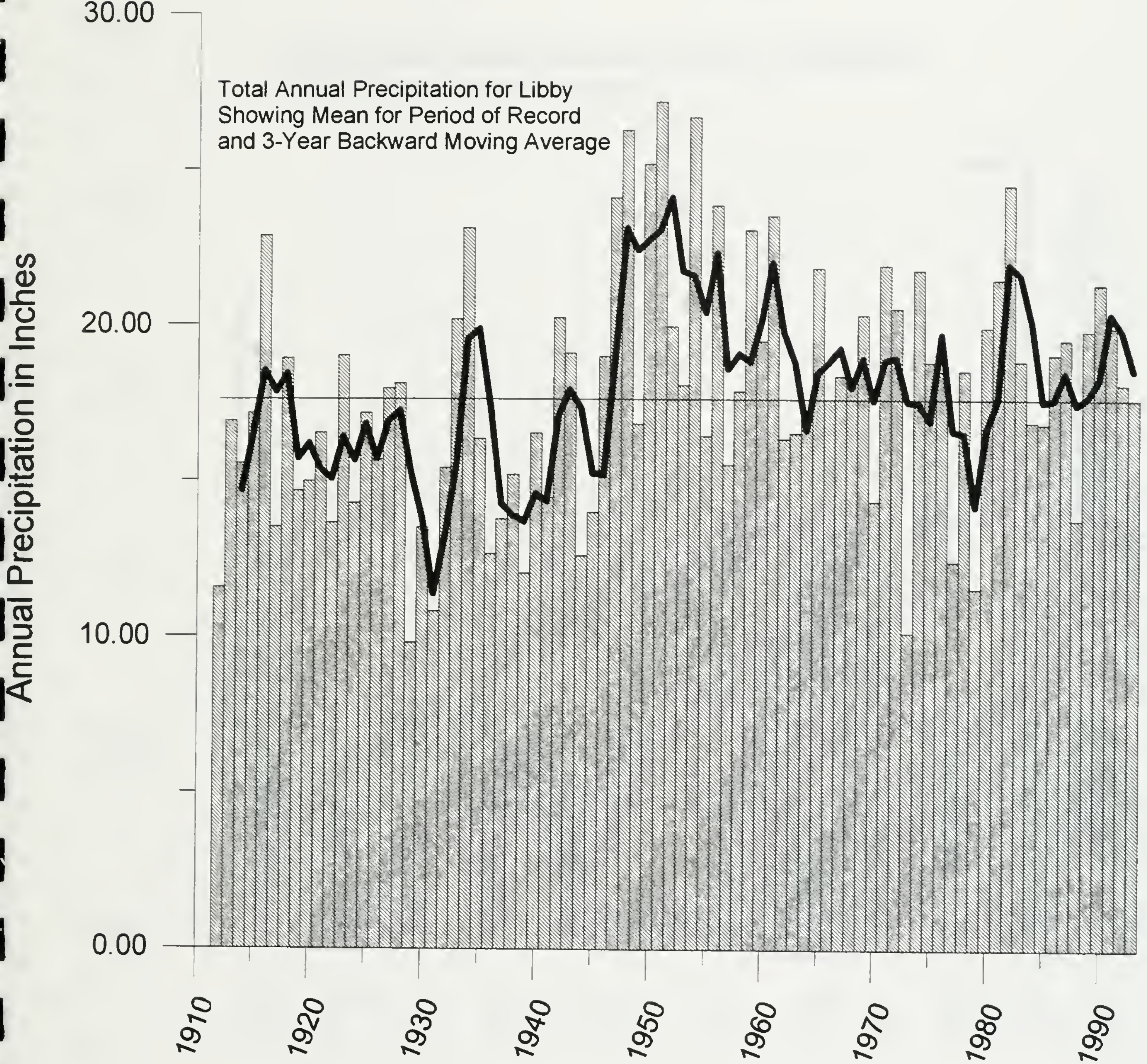
Maximum elevation within drainage basin: 5952 ft

Net relief of contributing basin: 2152 ft

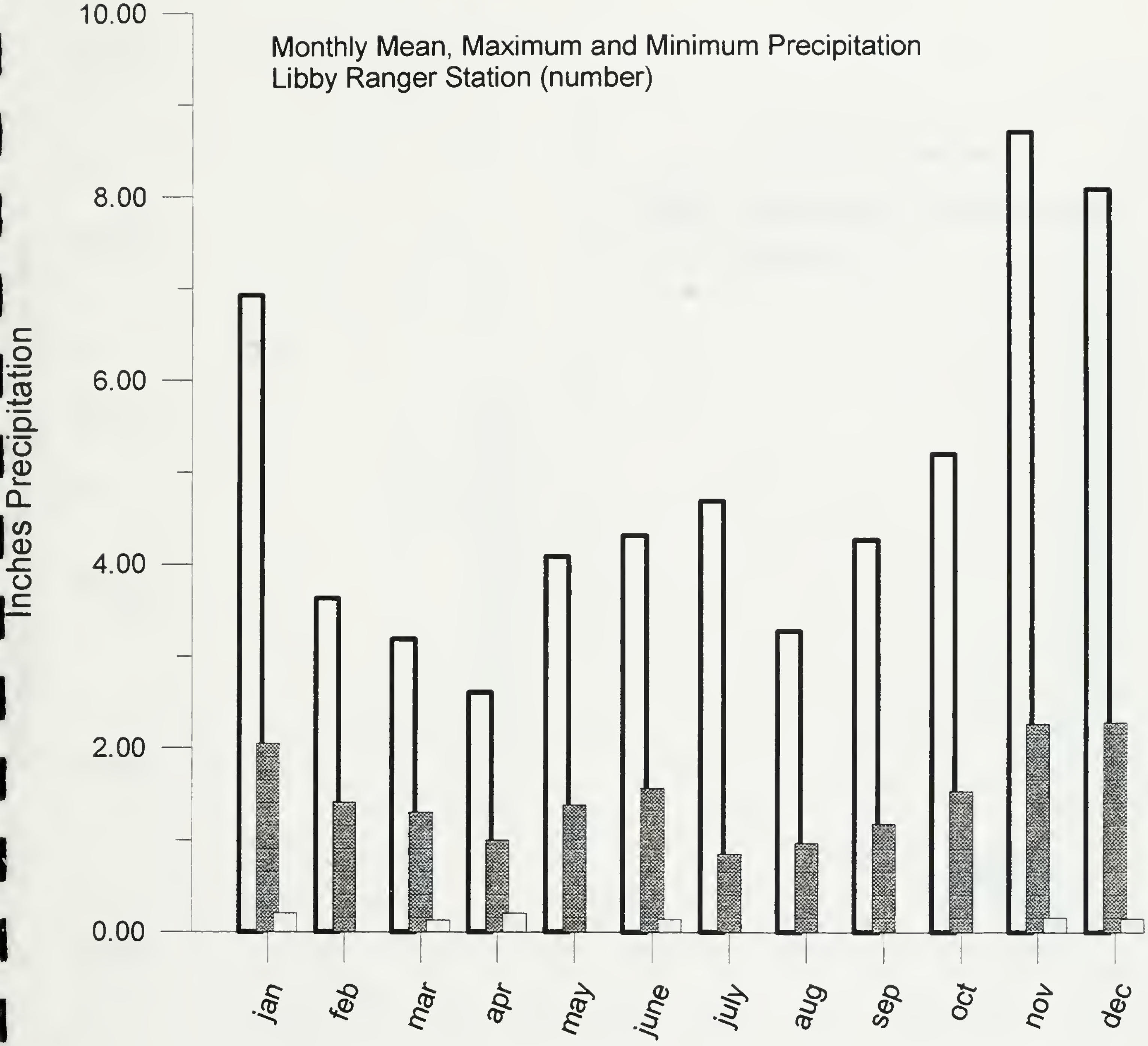
COE Hydrogeomorphic class: DEPRESSIONAL

Primary surficial geologic unit 110ALVM

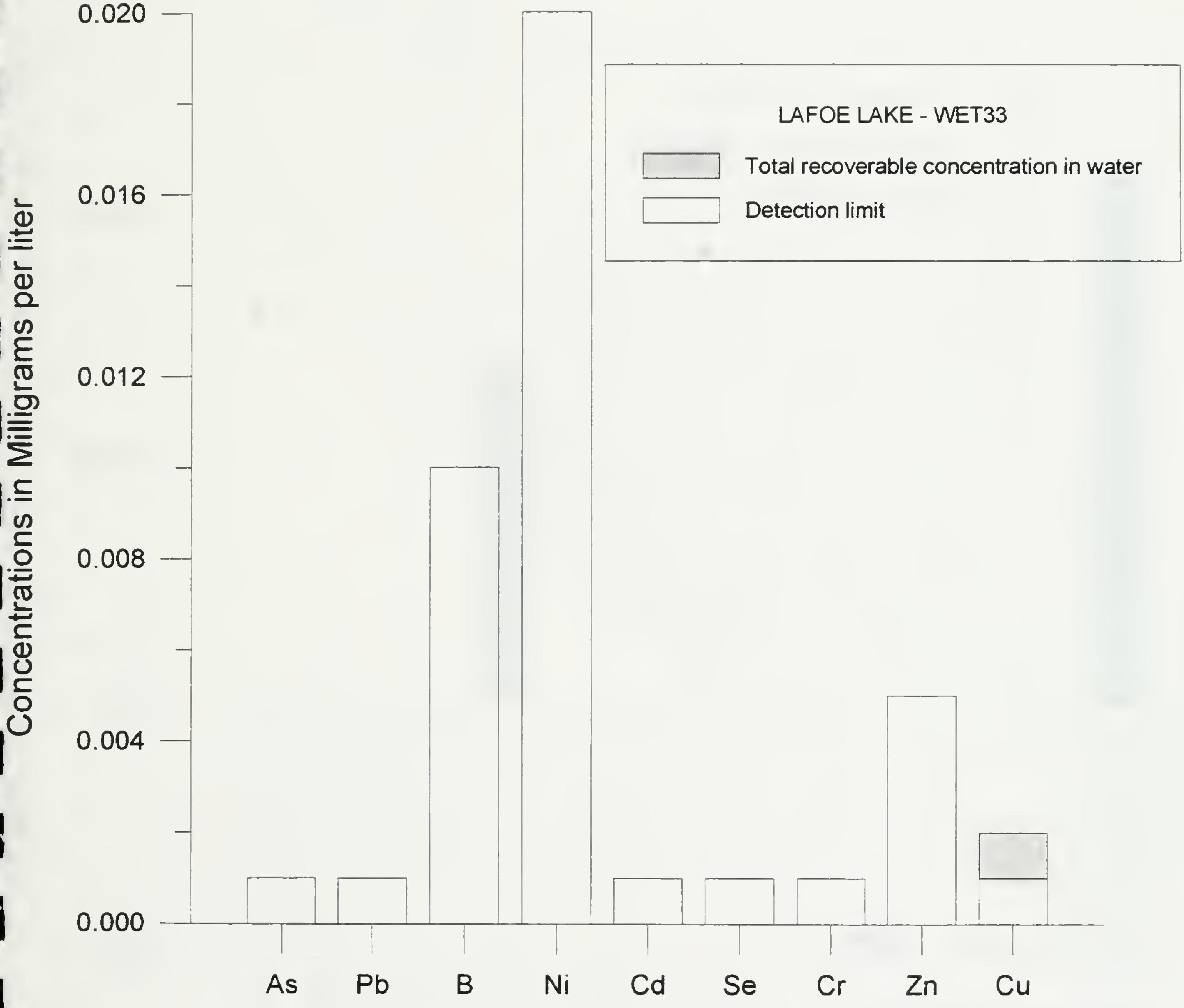
Primary bedrock geologic unit 400WLLC



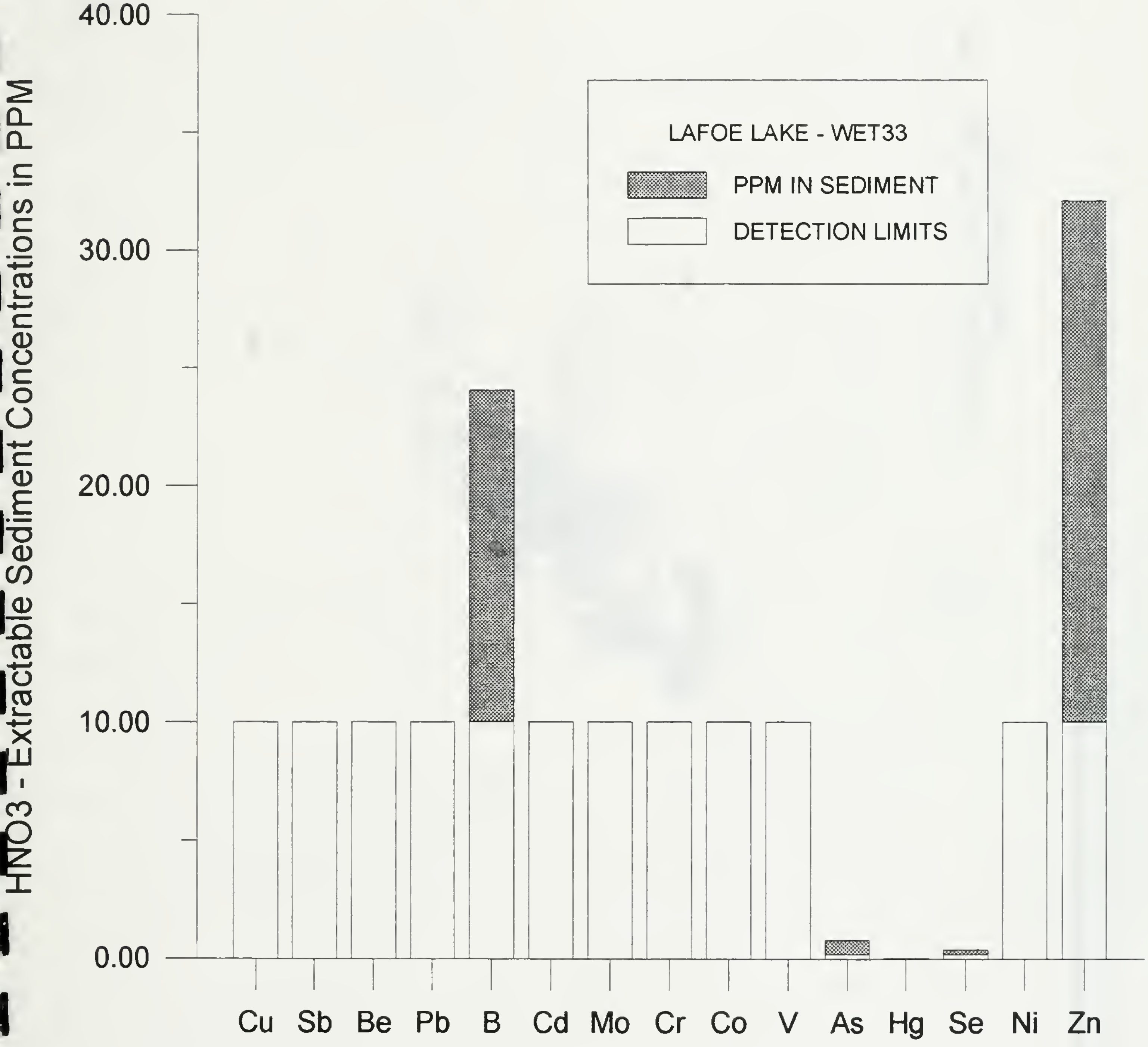
Total Annual Precipitation for Libby
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
30.00
20.00
10.00
0.00
1910
1920
1930
1940
1950
1960
1970
1980
1990

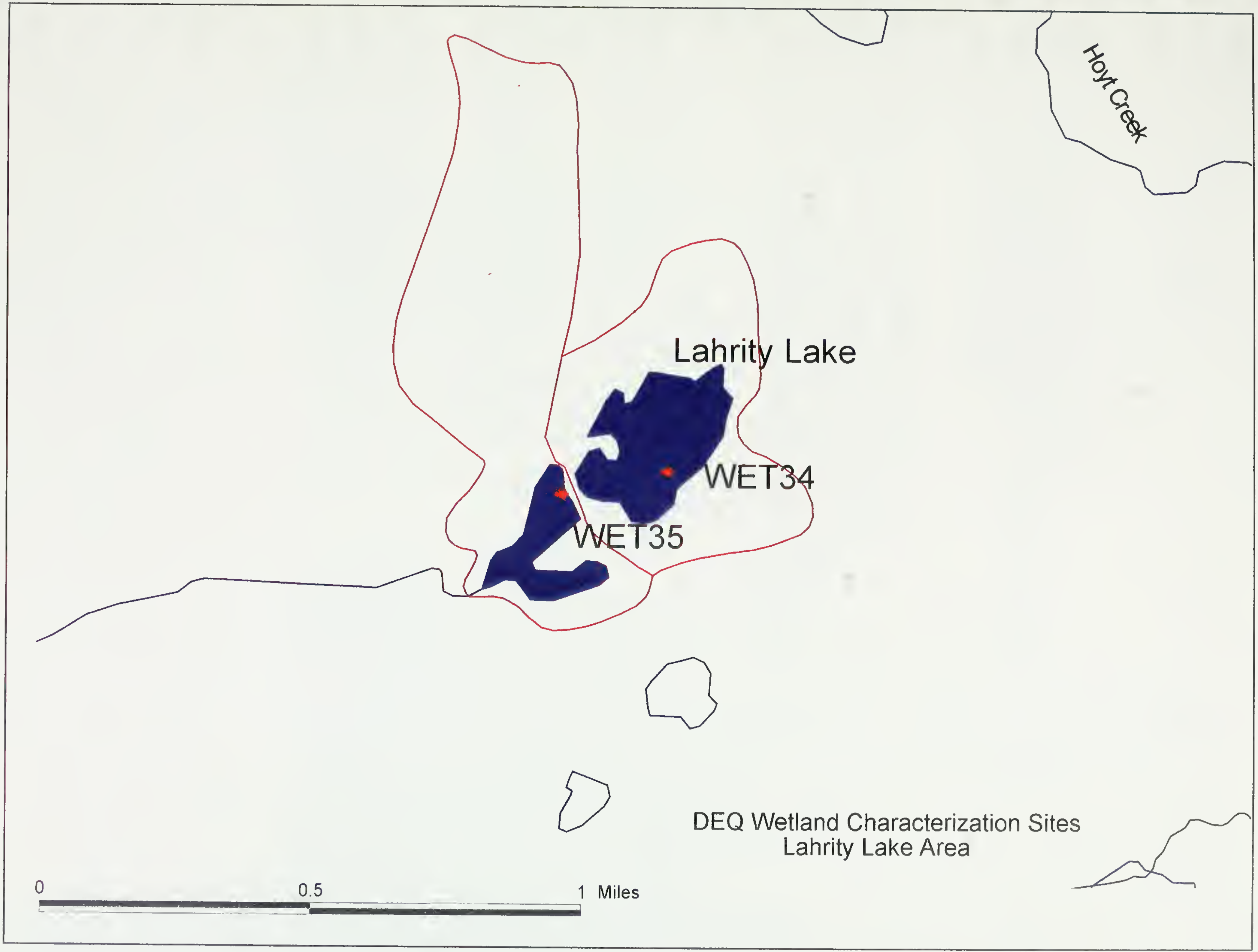


Monthly Mean, Maximum and Minimum Precipitation
Libby Ranger Station (number)



LAFOE LAKE - WET33
Total recoverable concentration in water
Detection limit
Concentrations in Milligrams per liter
0.020
0.016
0.012
0.008
0.004
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
40.00
30.00
20.00
10.00
0.00
LAFOE LAKE - WET33
PPM IN SEDIMENT
DETECTION LIMITS
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Sites
Lahrity Lake Area

Wetland: LAHRITY LAKE	Site Code: WET34
7.5 Minute Quad: Ovando	Lat: 47 1 23 Long: 113 10 55

Mean Annual Precipitation in Inches:	15.00
Mean Annual Potential Evaporation (Penman) in Inches:	32.00
'Net Precipitation' in Inches:	-17.00

Site does not have a mapped surface inlet.

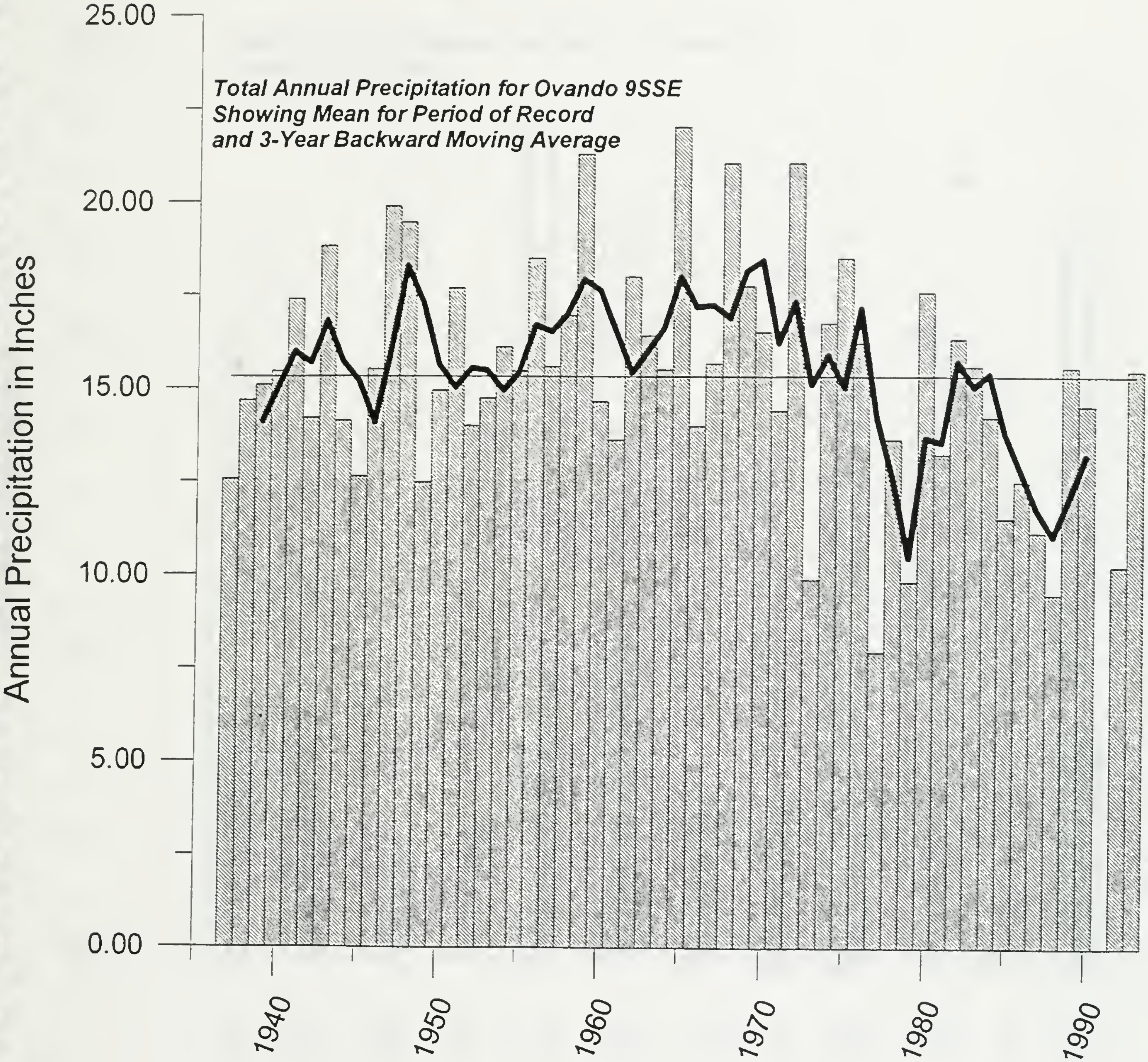
Site does not have a mapped surface outlet.

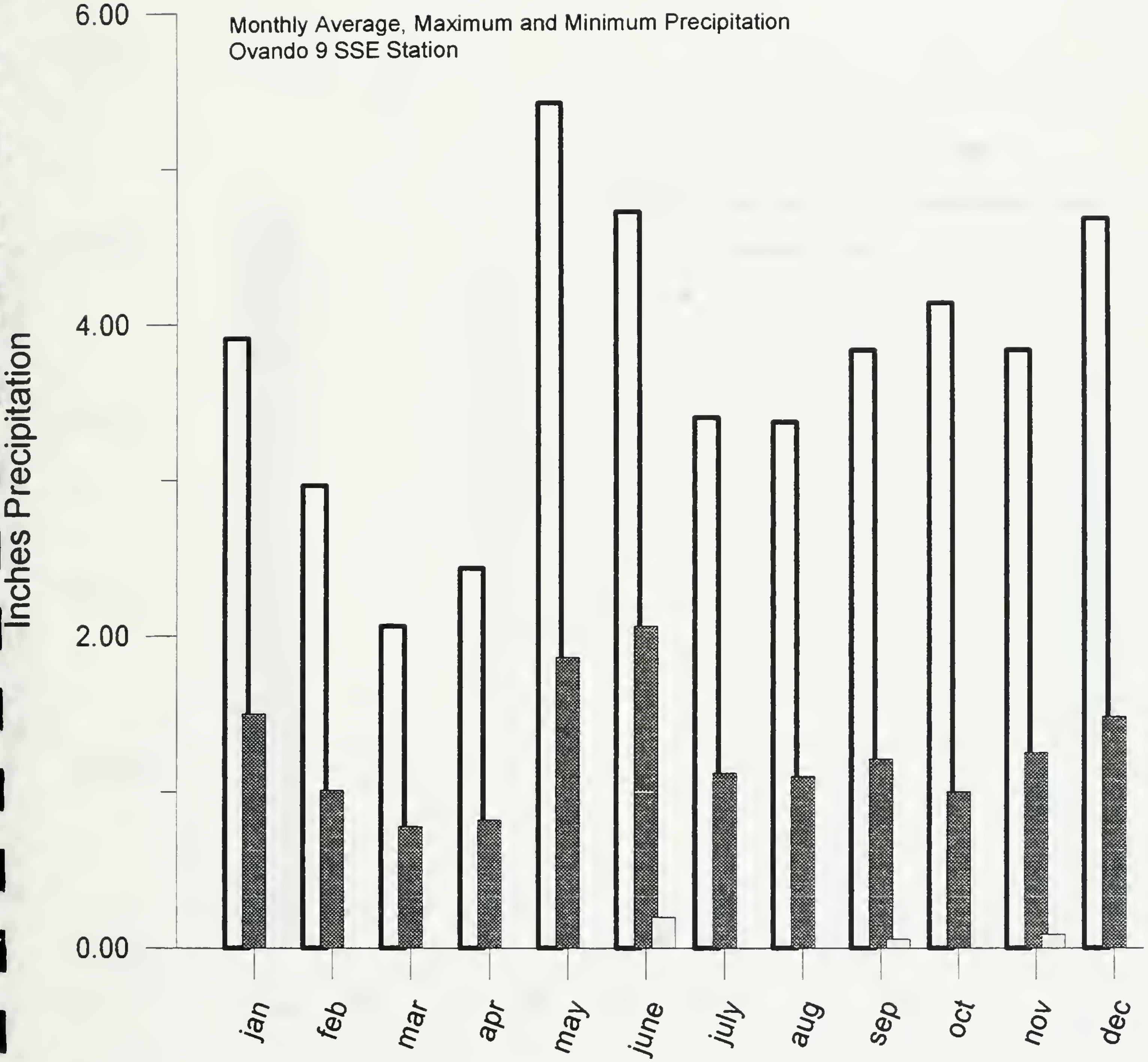
Site is not known to be artificially impounded.

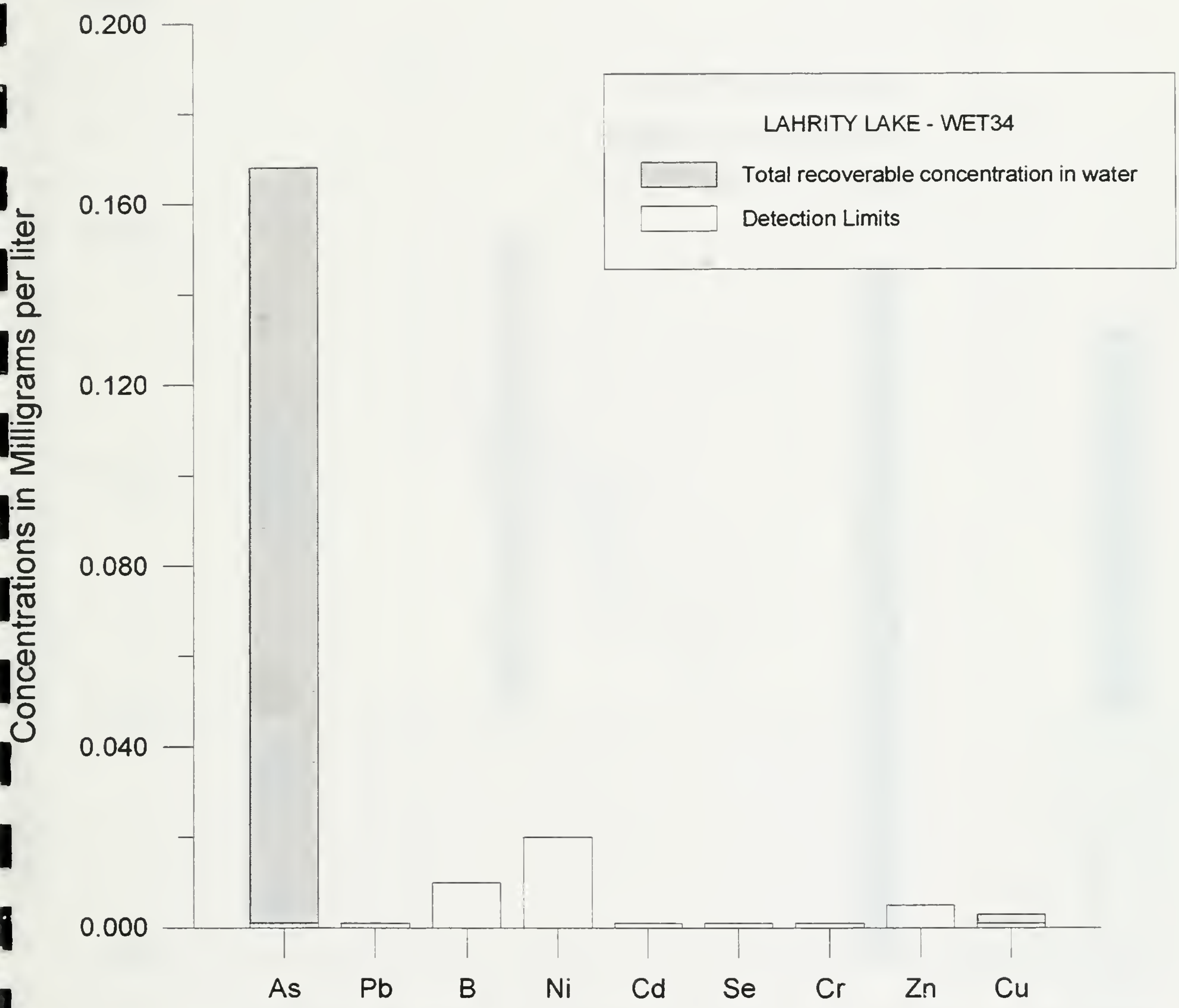
Site does not have known significant water imports.

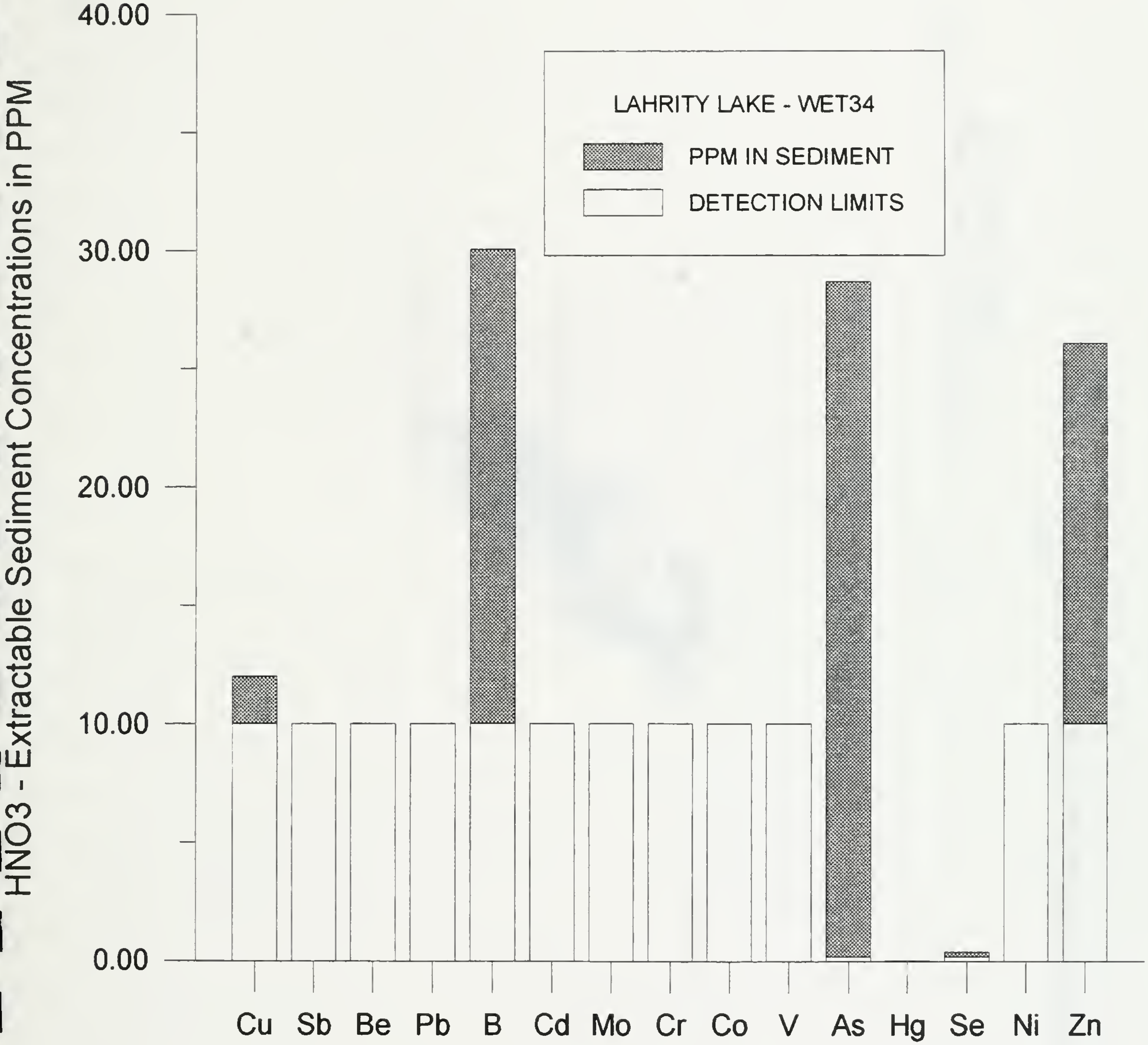
Mapped area of wetland:	32 acres
Area of contributing drainage basin:	120 acres
Mapped elevation of wetland surface:	4145 ft
Maximum elevation within drainage basin:	4440 ft
Net relief of contributing basin:	295 ft

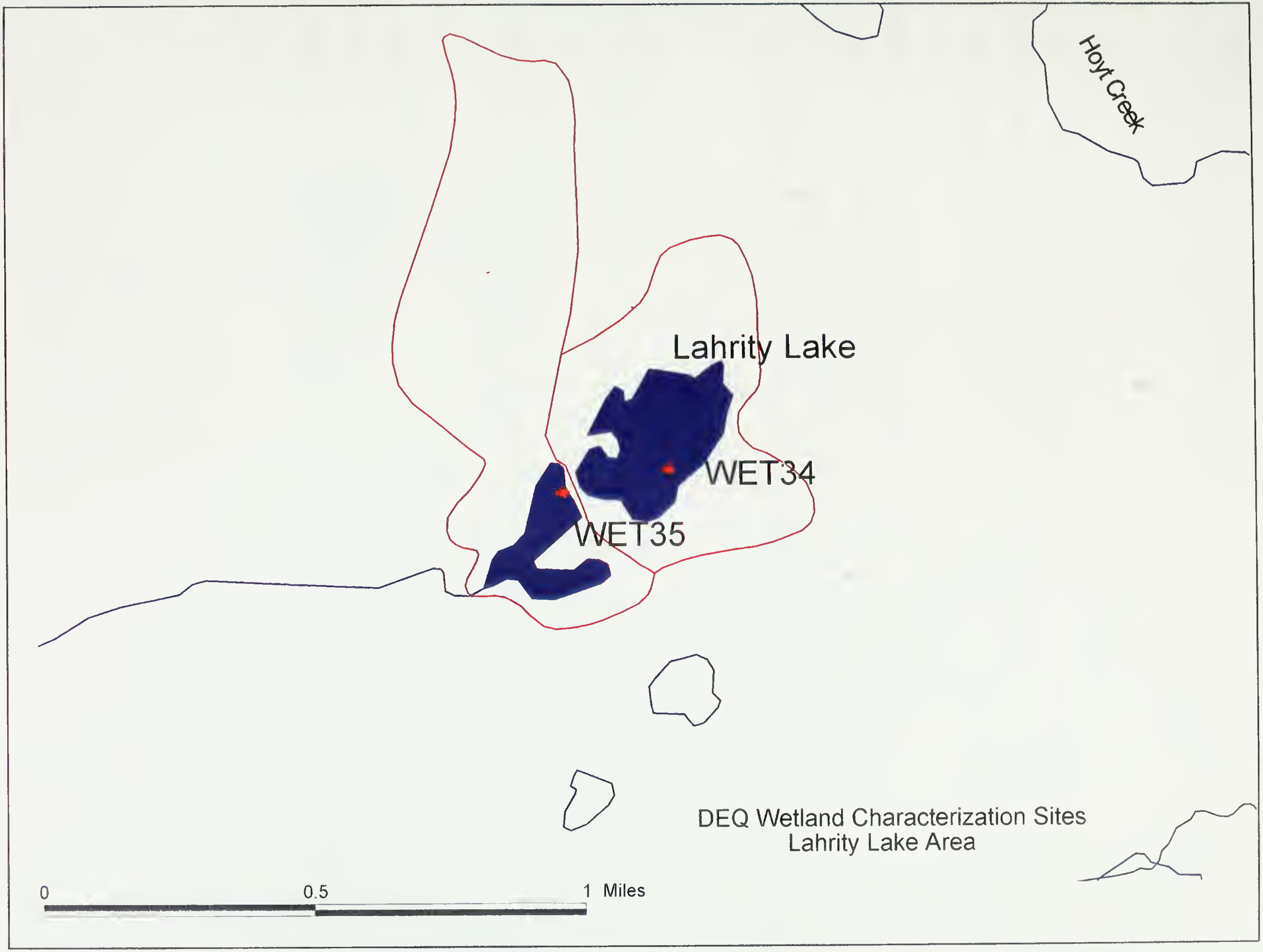
COE Hydrogeomorphic class:	FRINGE
Primary surficial geologic unit	112TILL
Primary bedrock geologic unit	400BELT


Total Annual Precipitation for Ovando 9SSE
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1940
1950
1960
1970
1980
1990


Monthly Average, Maximum and Minimum Precipitation
Ovando 9 SSE Station
Inches Precipitation
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec


LAHRITY LAKE - WET34
Total recoverable concentration in water
Detection Limits
Concentrations in Milligrams per liter
0.200
0.160
0.120
0.080
0.040
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


LAHRITY LAKE - WET34
▨ PPM IN SEDIMENT
☐ DETECTION LIMITS
HNO3 - Extractable Sediment Concentrations in PPM
40.00
30.00
20.00
10.00
0.00
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Sites
Lahrity Lake Area

Wetland: LAHRITY LAKE SOUTH WETLAND	Site Code: WET35
7.5 Minute Quad: Ovando	Lat: 47 1 20 Long: 113 11 15

Mean Annual Precipitation in Inches:	15.00
Mean Annual Potential Evaporation (Penman) in Inches:	32.00
'Net Precipitation' in Inches:	-17.00

Site does not have a mapped surface inlet.

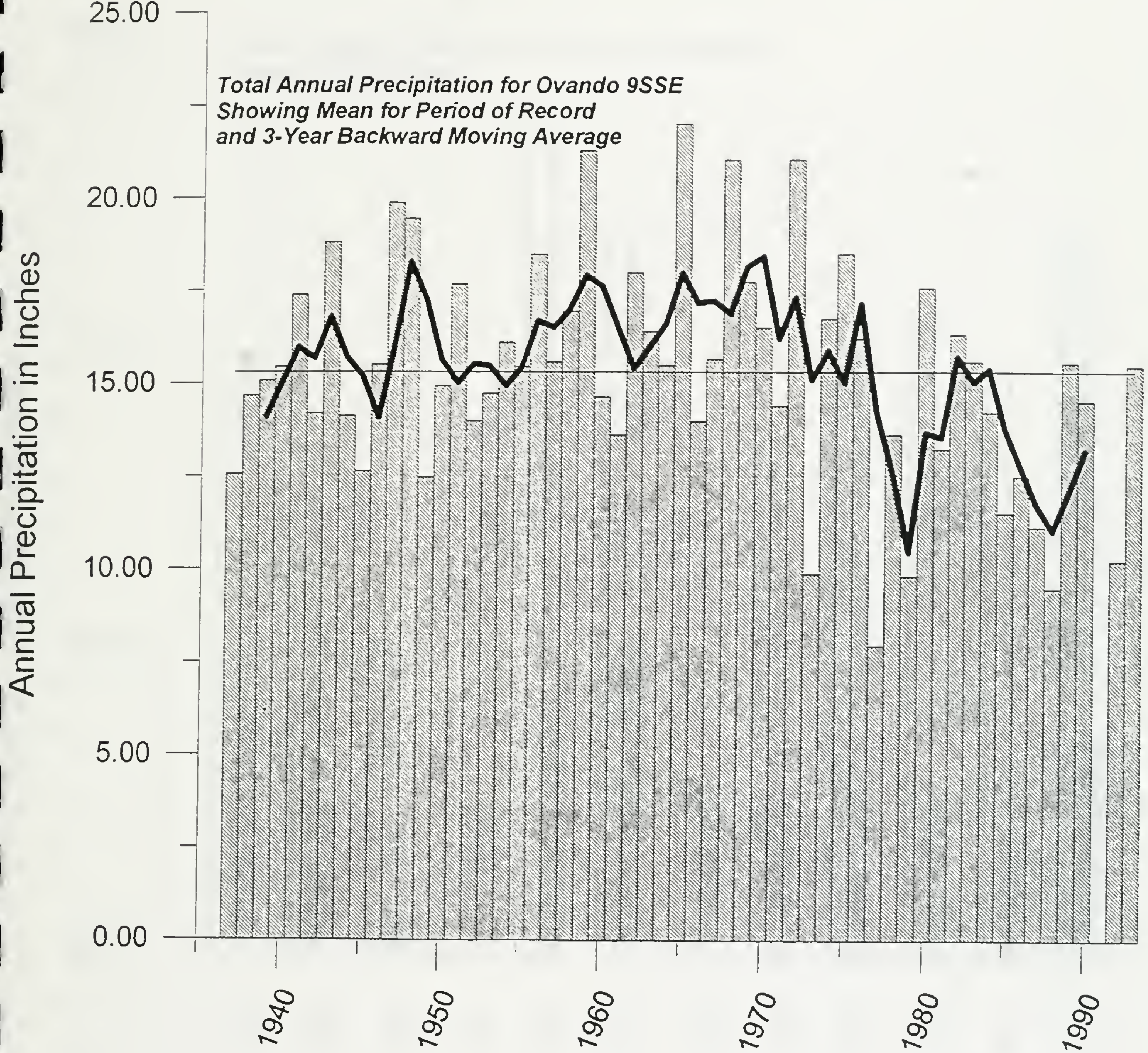
Site has a mapped surface outlet.

Site is not known to be artificially impounded.

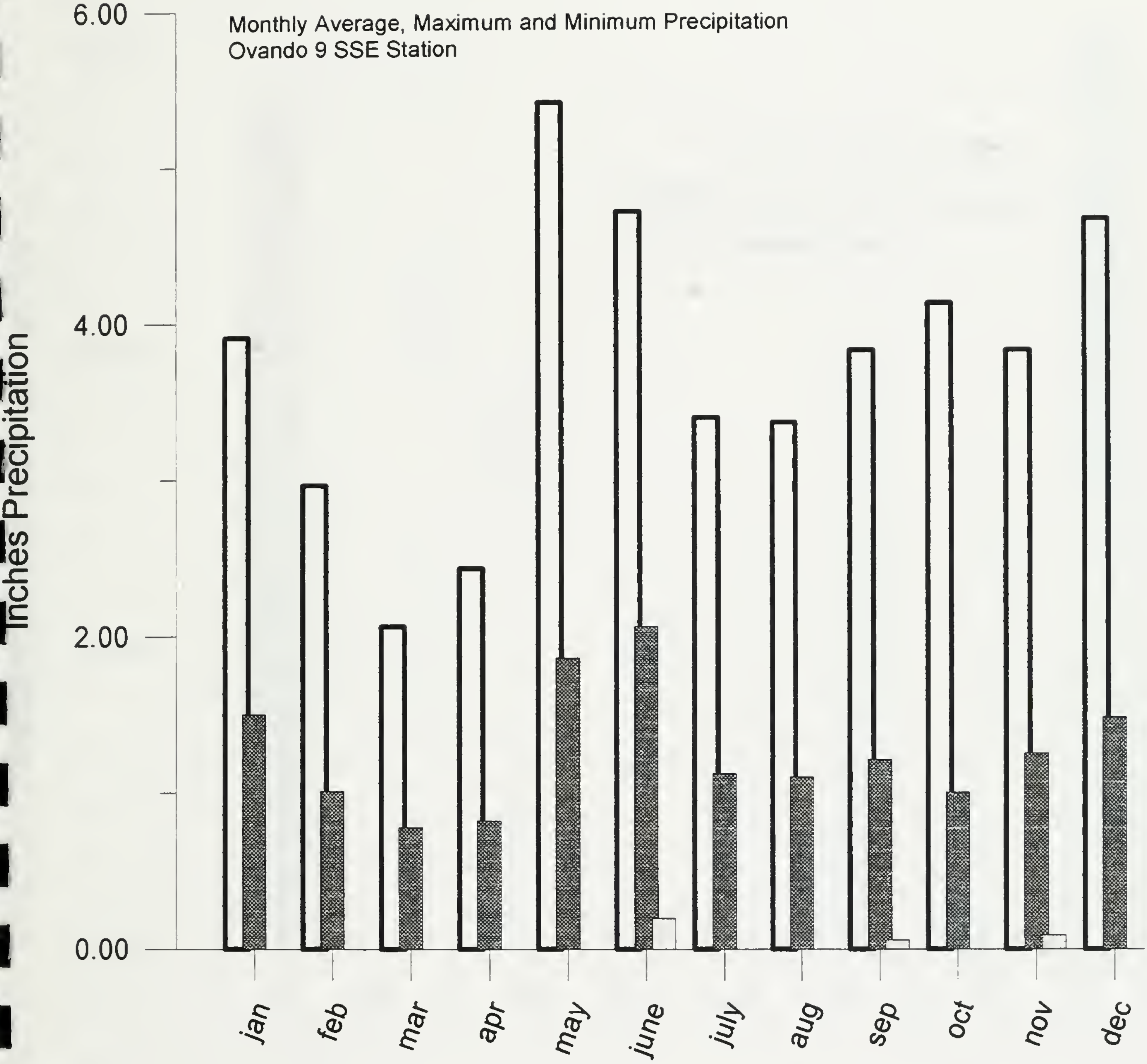
Site does not have known significant water imports.

Mapped area of wetland:	14 acres
Area of contributing drainage basin:	170 acres
Mapped elevation of wetland surface:	4155 ft
Maximum elevation within drainage basin:	4565 ft
Net relief of contributing basin:	410 ft

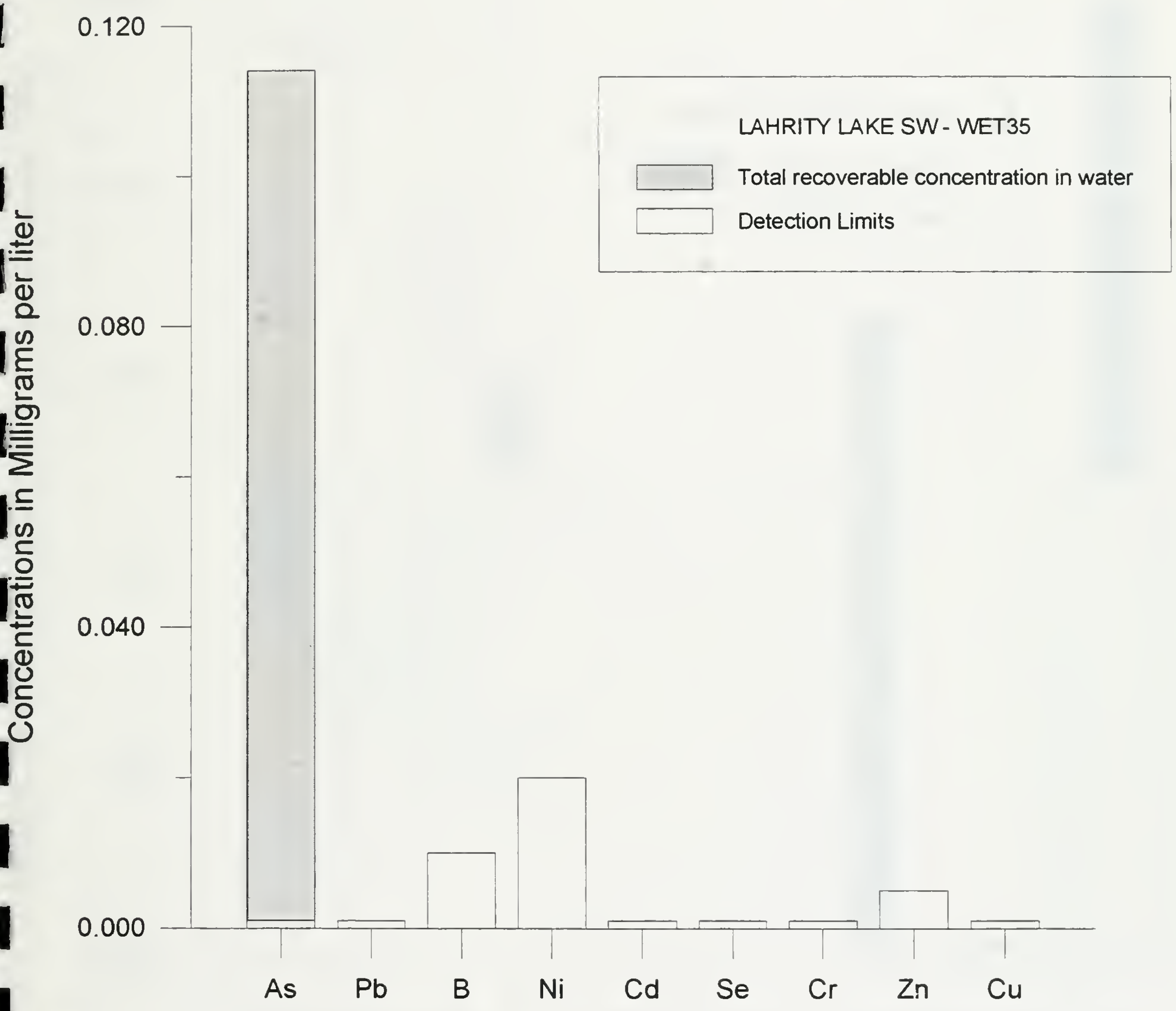
COE Hydrogeomorphic class:	DEPRESSIONAL
Primary surficial geologic unit	112TILL
Primary bedrock geologic unit	400BELT

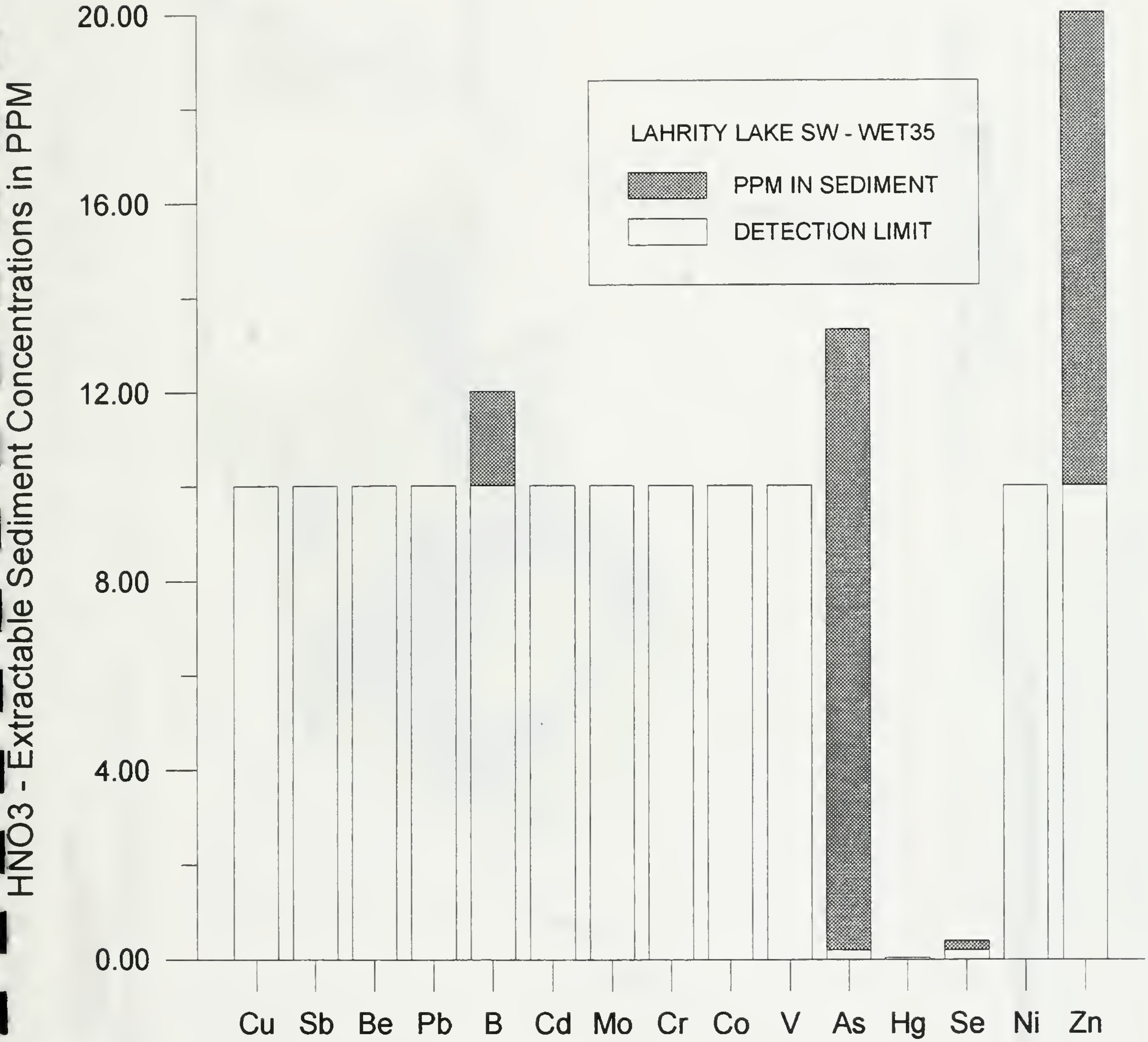


Total Annual Precipitation for Ovando 9SSE
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1940
1950
1960
1970
1980
1990

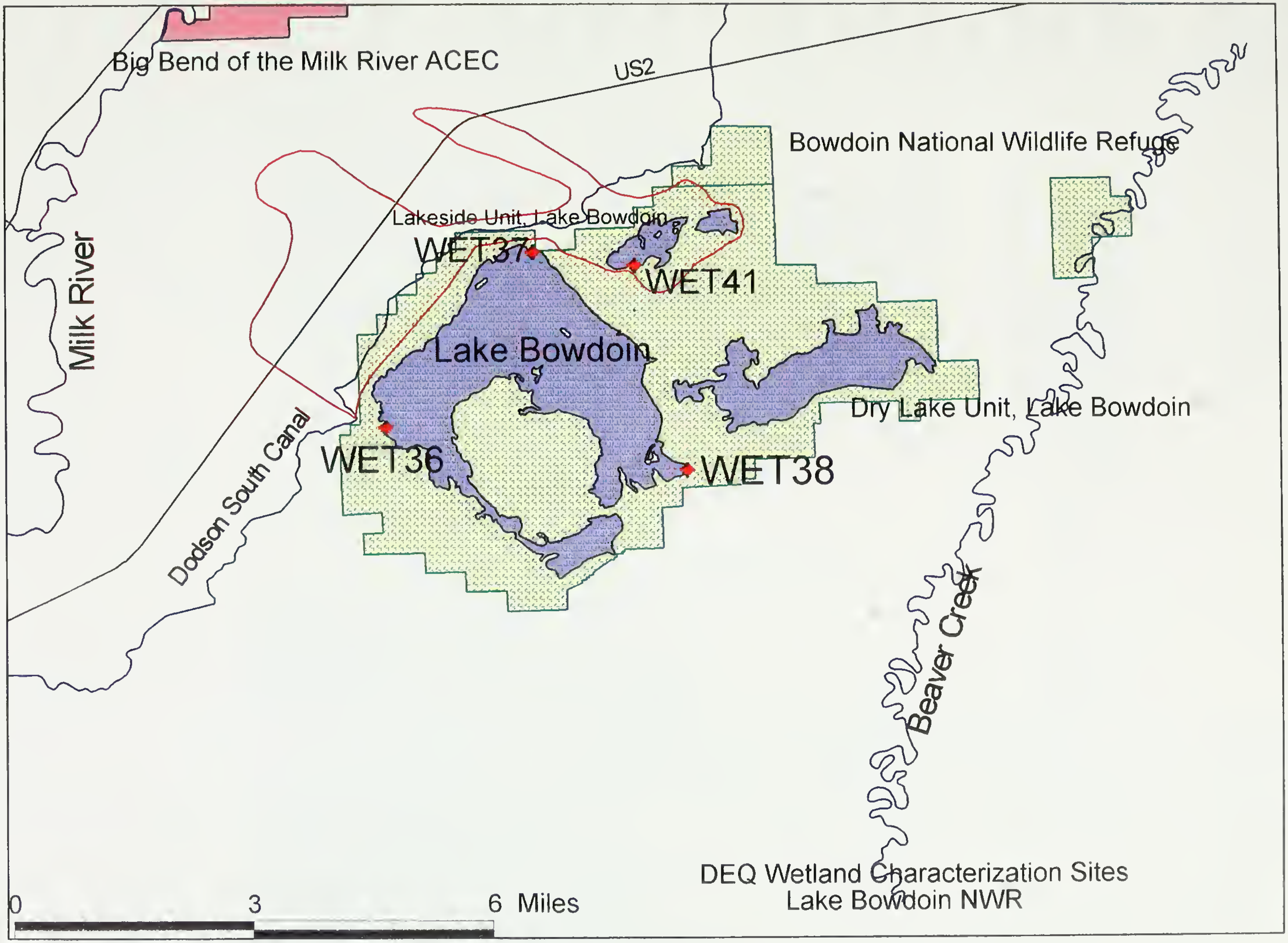


Monthly Average, Maximum and Minimum Precipitation
Ovando 9 SSE Station


LAHRITY LAKE SW - WET35
Total recoverable concentration in water
Detection Limits
Concentrations in Milligrams per liter
0.120
0.080
0.040
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu



HNO3 - Extractable Sediment Concentrations in PPM
20.00
16.00
12.00
8.00
4.00
0.00
LAHRITY LAKE SW - WET35
▨ PPM IN SEDIMENT
☐ DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn


Big Bend of the Milk River ACEC
US2
Bowdoin National Wildlife Refuge
Milk River
Lakeside Unit, Lake Bowdoin
WET37
WET41
Lake Bowdoin
Dry Lake Unit, Lake Bowdoin
Dodson South Canal
WET36
WET38
Beaver Creek
0
3
6 Miles
DEQ Wetland Characterization Sites
Lake Bowdoin NWR

Wetland: LAKE BOWDOIN INLET

Site Code: WET36

7.5 Minute Quad: LAKE BOWDOIN

Lat: 48 23 45
Long: 107 43 25

Mean Annual Precipitation in Inches: 11.00

Mean Annual Potential Evaporation (Penman) in Inches: 39.00

'Net Precipitation' in Inches: -28.00

Site has a mapped surface inlet.

Site has a mapped surface outlet.

Site is artificially impounded.

Site has significant water imports.

Mapped area of wetland: 3933 acres

Area of contributing drainage basin: 7166000 acres

Mapped elevation of wetland surface: 2209 ft

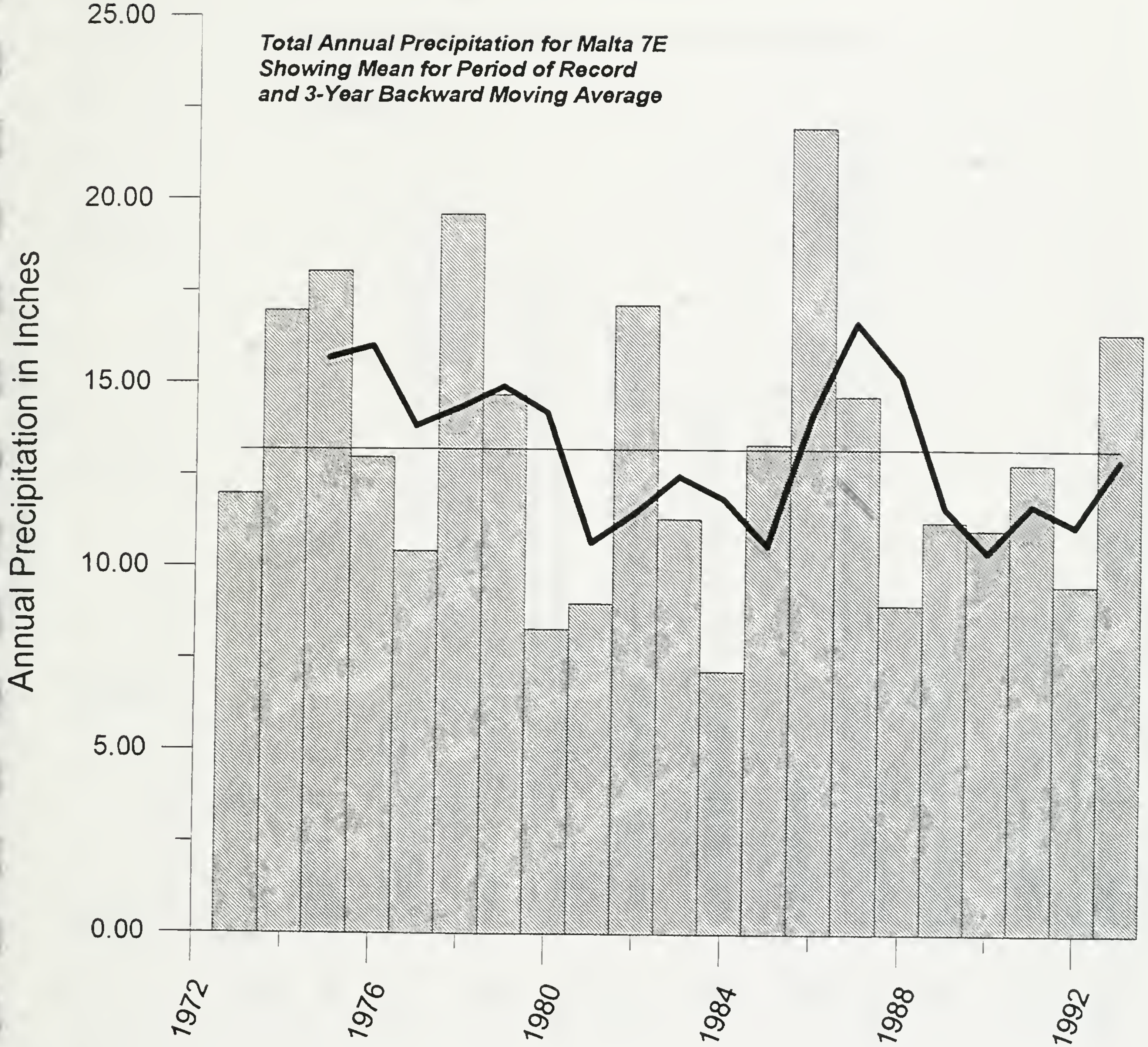
Maximum elevation within drainage basin: 2625 ft

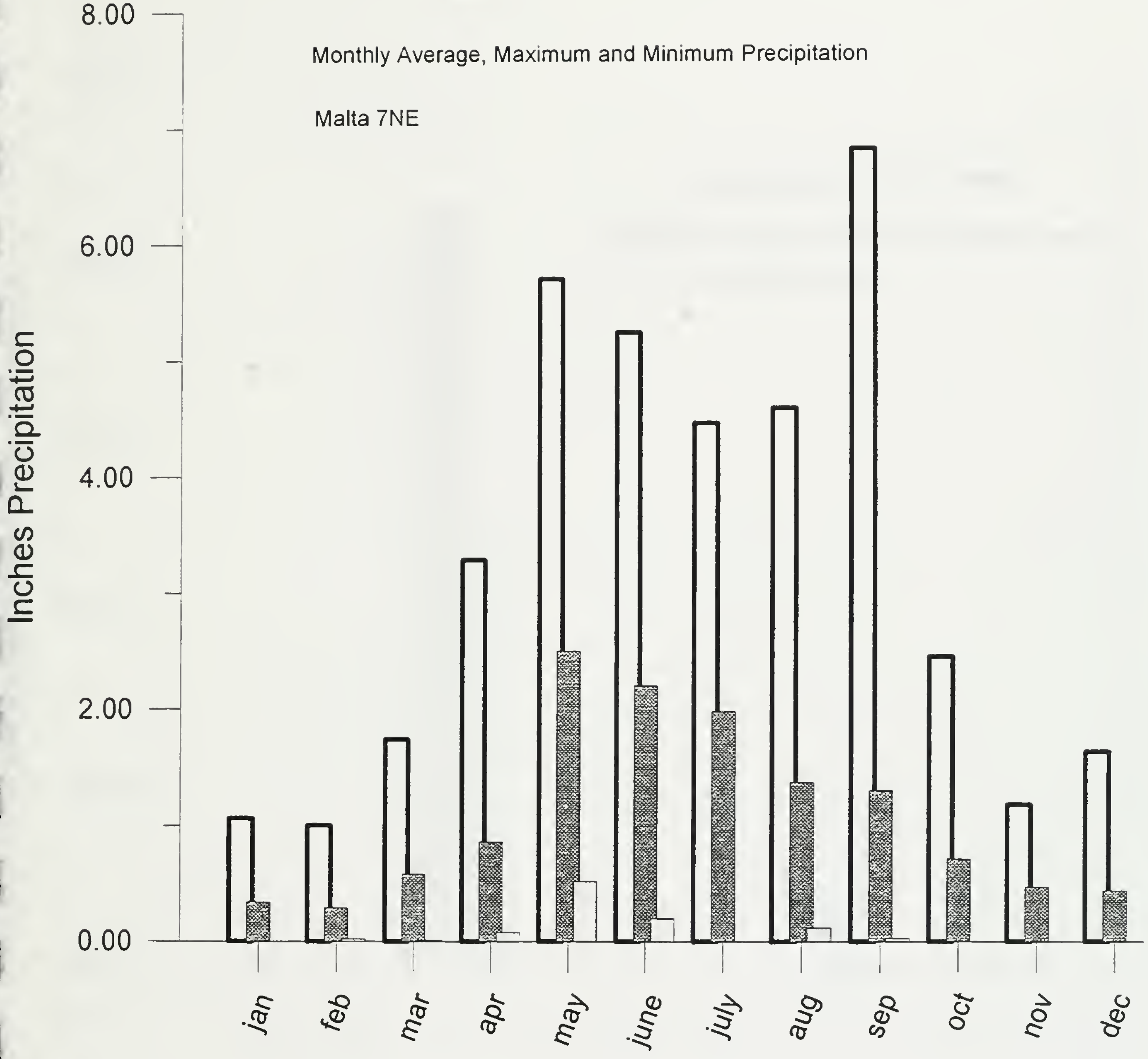
Net relief of contributing basin: 416 ft

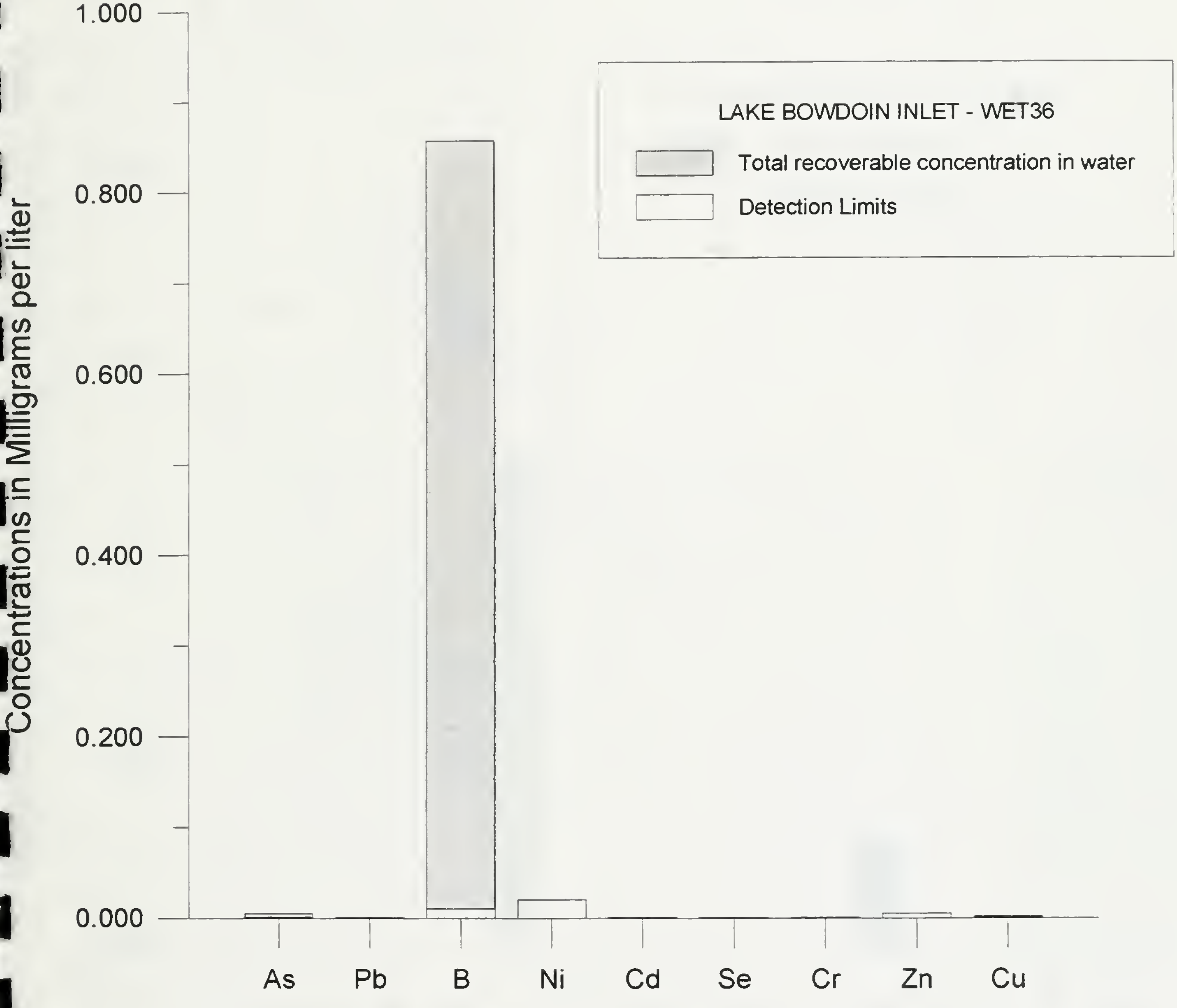
COE Hydrogeomorphic class: FRINGE

Primary surficial geologic unit 110"LAC"

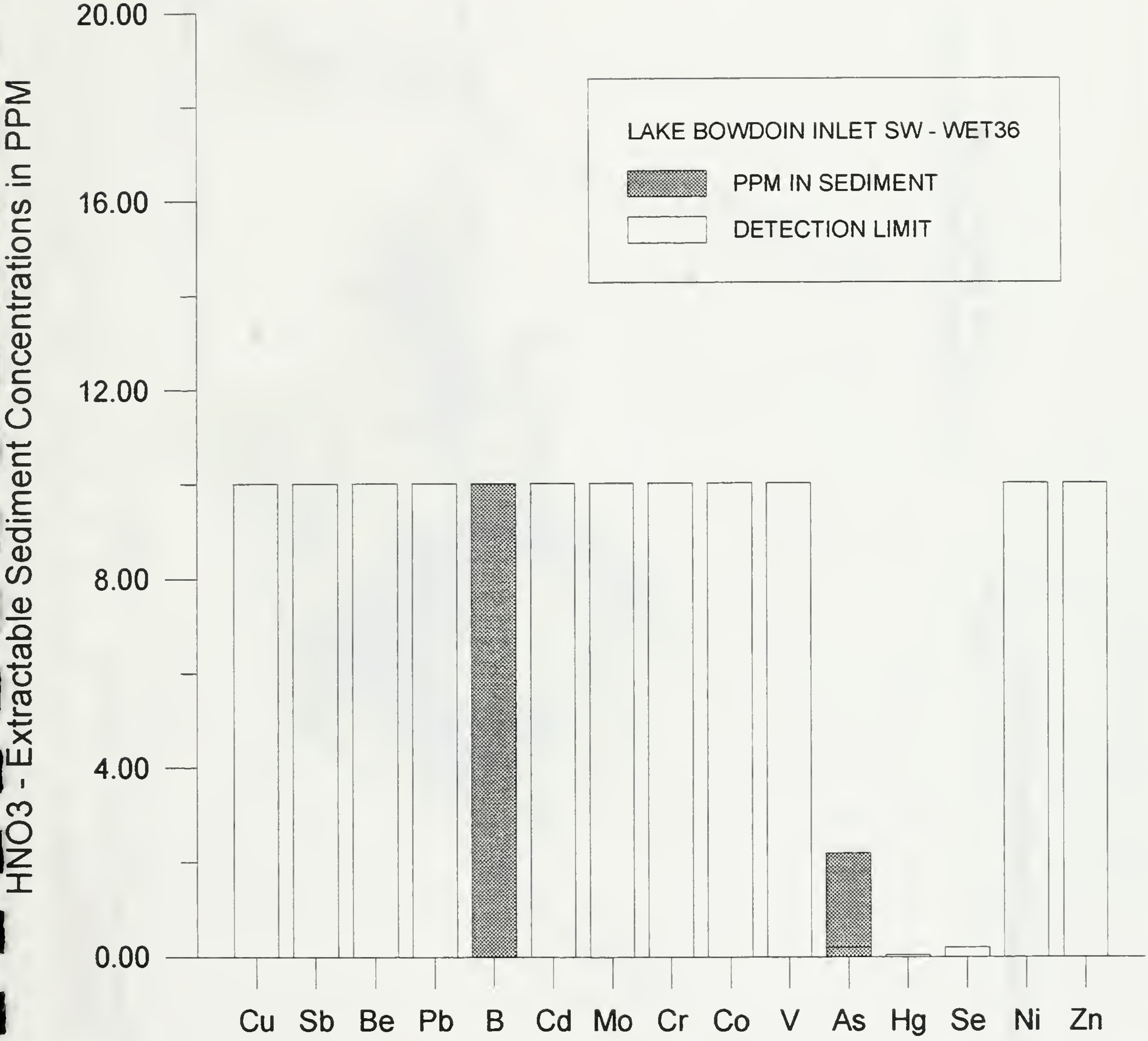
Primary bedrock geologic unit 211CLGG

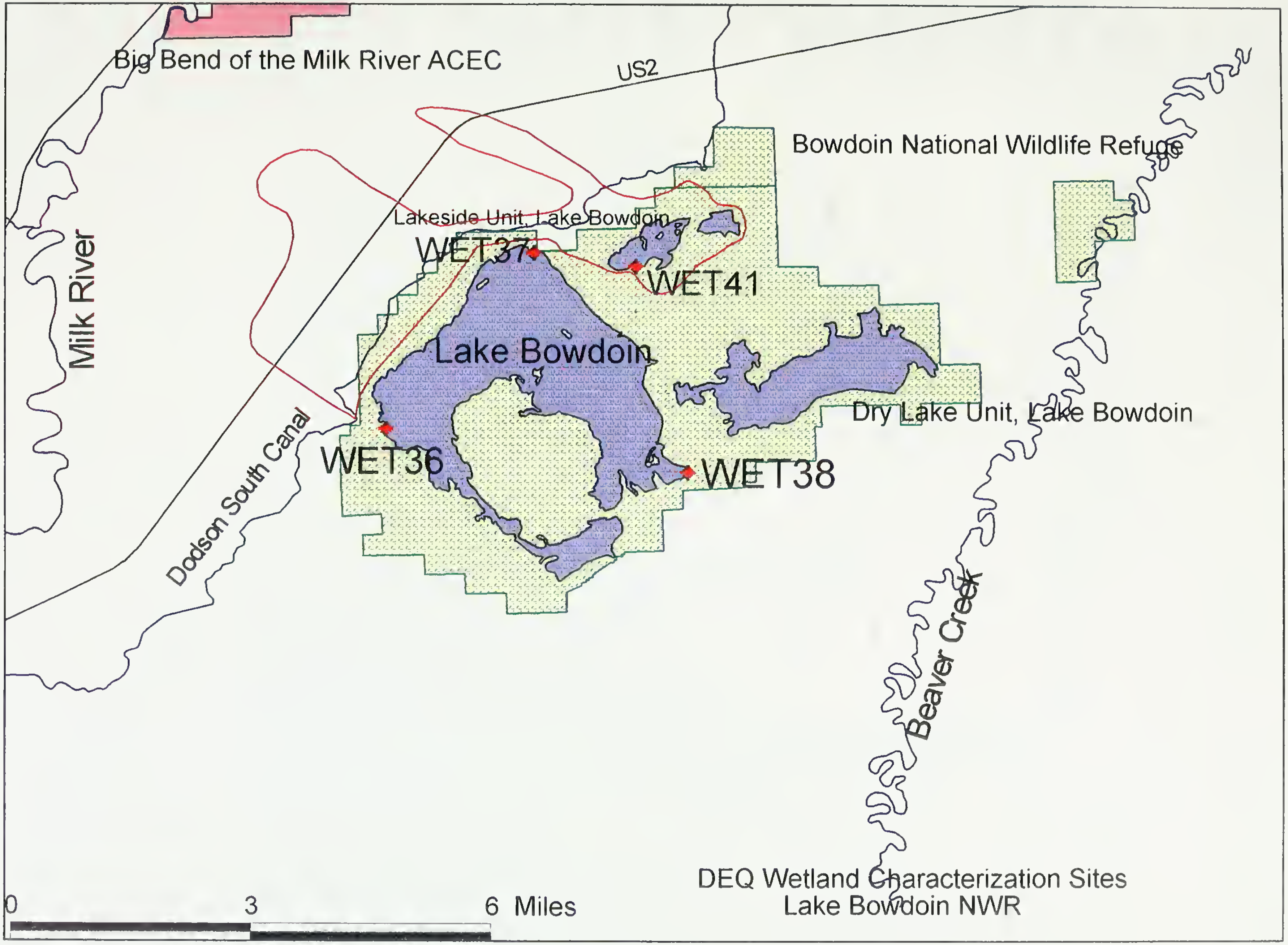

Total Annual Precipitation for Malta 7E
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1972
1976
1980
1984
1988
1992


Monthly Average, Maximum and Minimum Precipitation
Malta 7NE
Inches Precipitation
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec



Concentrations in Milligrams per liter
1.000
0.800
0.600
0.400
0.200
0.000
LAKE BOWDOIN INLET - WET36
Total recoverable concentration in water
Detection Limits
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


HNO3 - Extractable Sediment Concentrations in PPM
20.00
16.00
12.00
8.00
4.00
0.00
LAKE BOWDOIN INLET SW - WET36
▨ PPM IN SEDIMENT
☐ DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn


Big Bend of the Milk River ACEC
US2
Milk River
Bowdoin National Wildlife Refuge
Lakeside Unit, Lake Bowdoin
WET37
WET41
Lake Bowdoin
Dry Lake Unit, Lake Bowdoin
WET36
WET38
Dodson South Canal
Beaver Creek
0
3
6 Miles
DEQ Wetland Characterization Sites
Lake Bowdoin NWR

Wetland: LAKE BOWDOIN NORTH SHORE Site Code: WET37

7.5 Minute Quad: LAKE BOWDOIN

Lat: 48 25 40
Long: 107 41 0

Mean Annual Precipitation in Inches: 11.00

Mean Annual Potential Evaporation (Penman) in Inches: 39.00

'Net Precipitation' in Inches: -28.00

Site has a mapped surface inlet.

Site has a mapped surface outlet.

Site is artificially impounded.

Site has significant water imports.

Mapped area of wetland: 3933 acres

Area of contributing drainage basin: 7166000 acres

Mapped elevation of wetland surface: 2209 ft

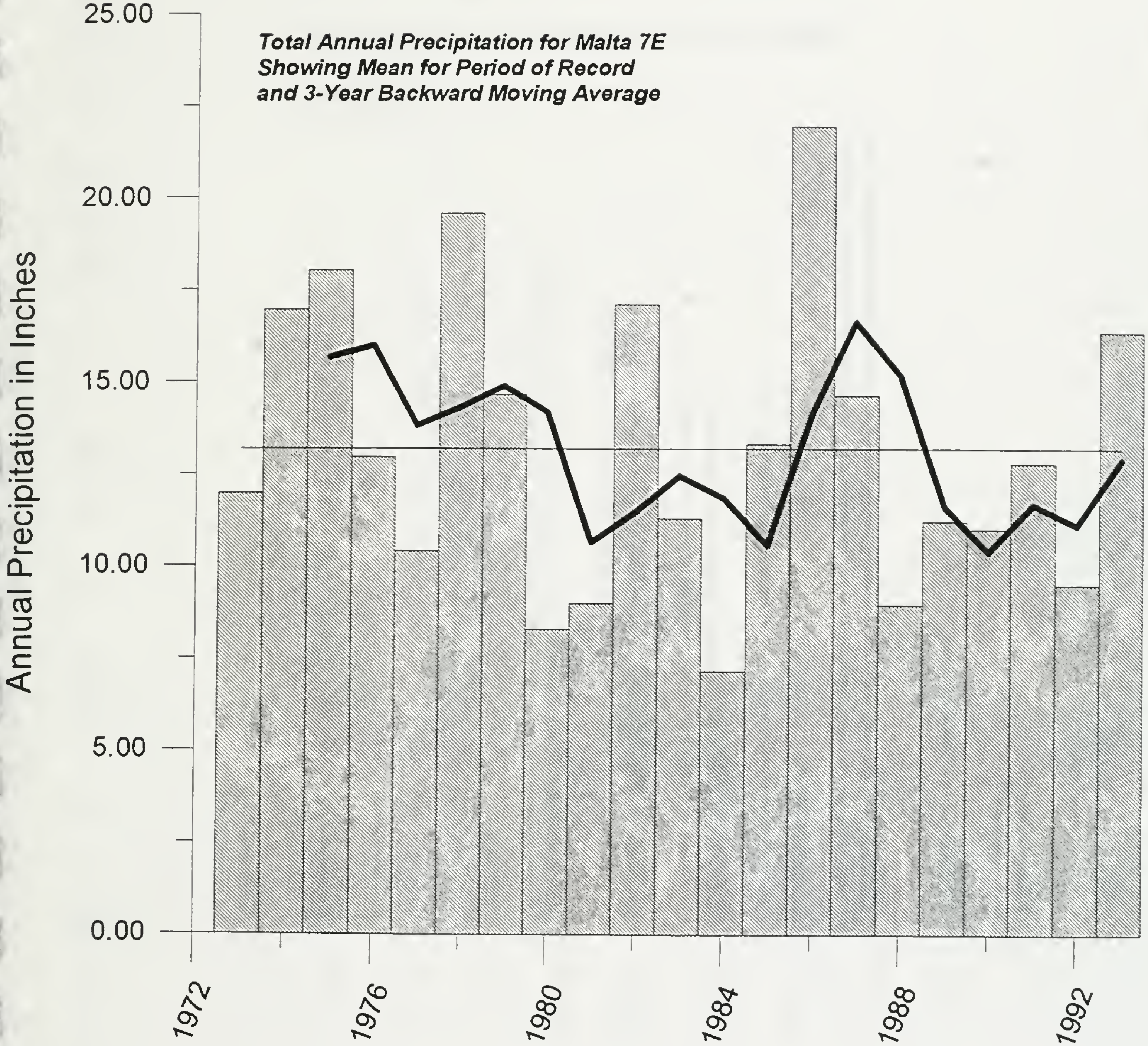
Maximum elevation within drainage basin: 2625 ft

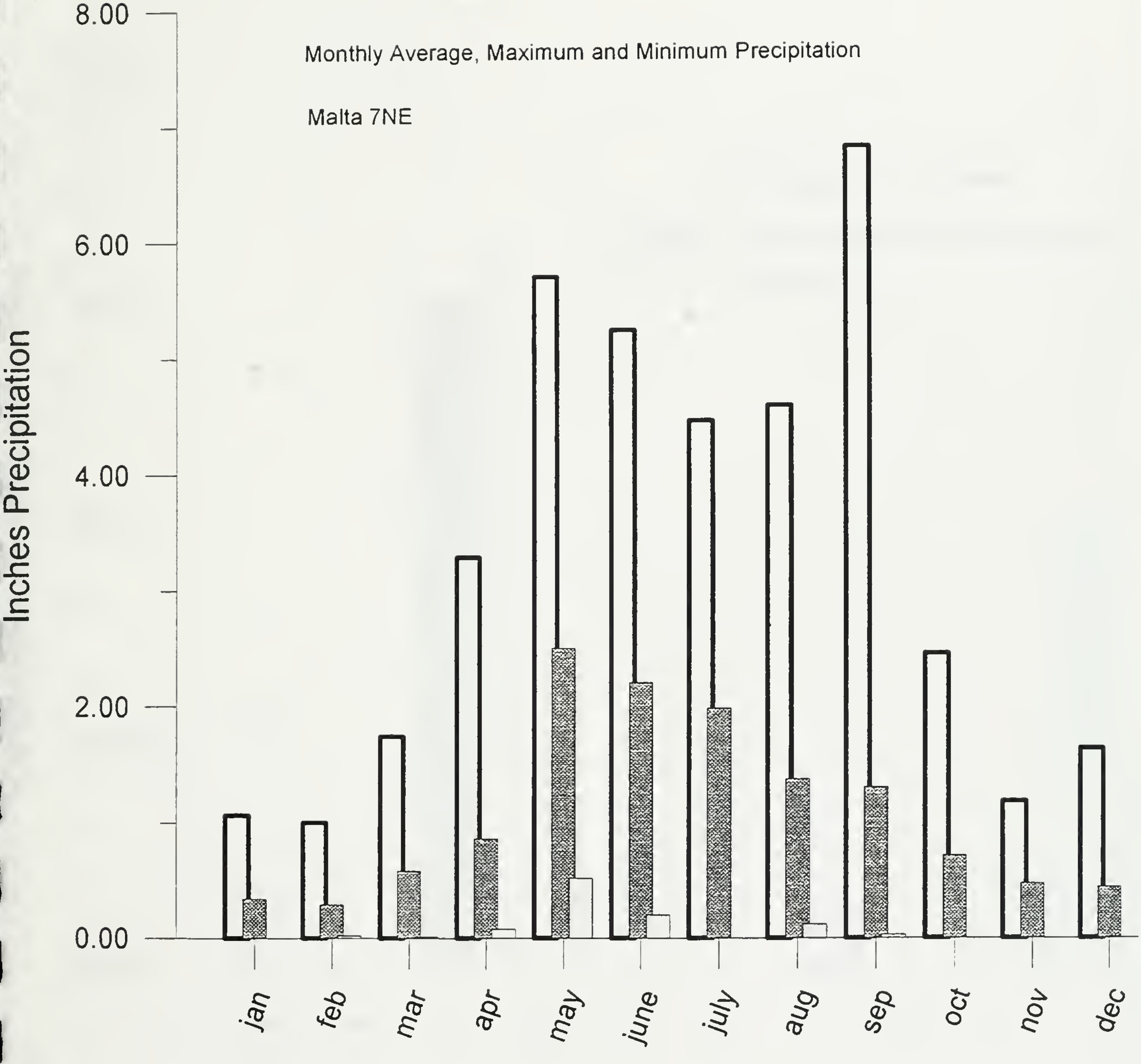
Net relief of contributing basin: 416 ft

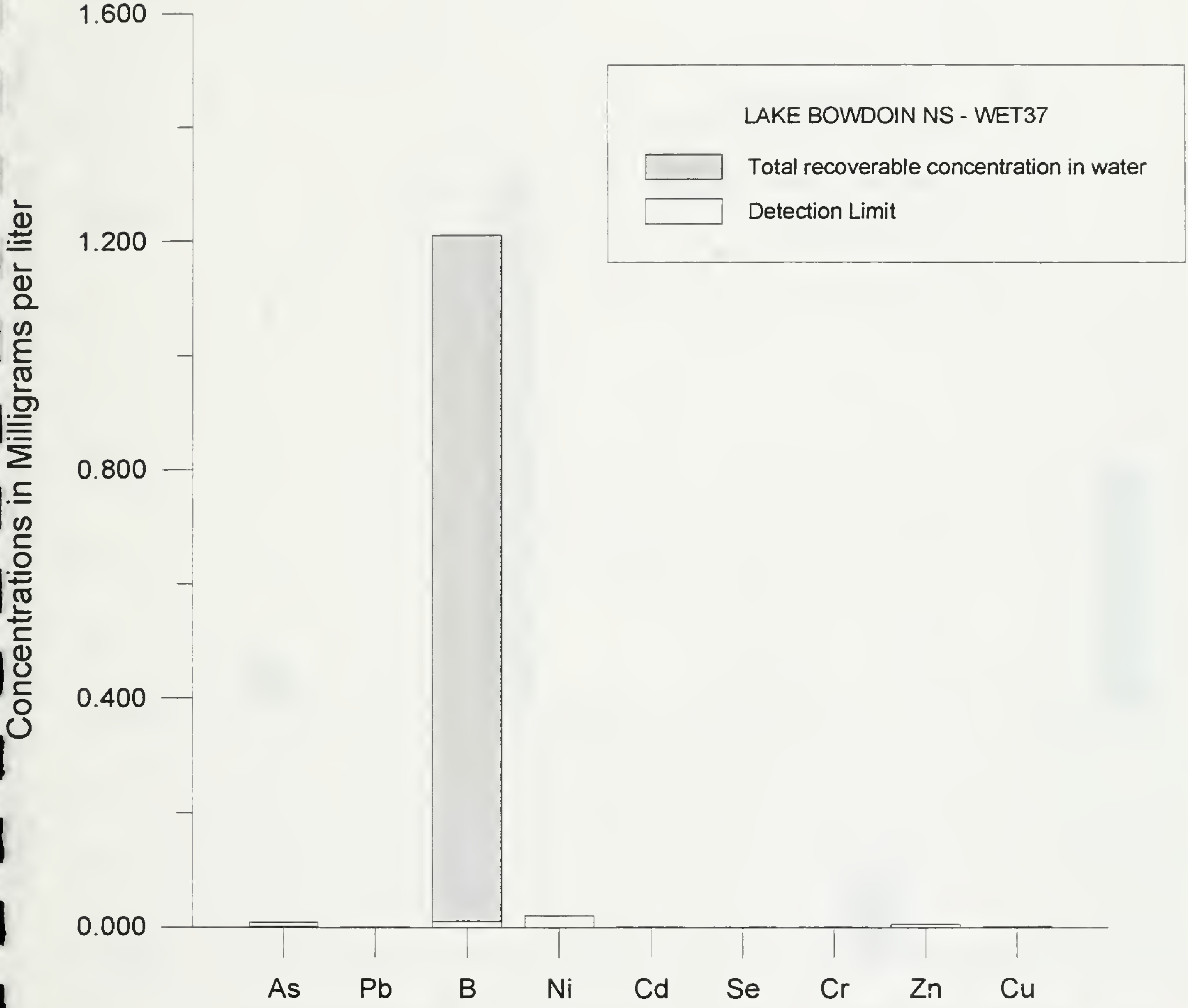
COE Hydrogeomorphic class: FRINGE

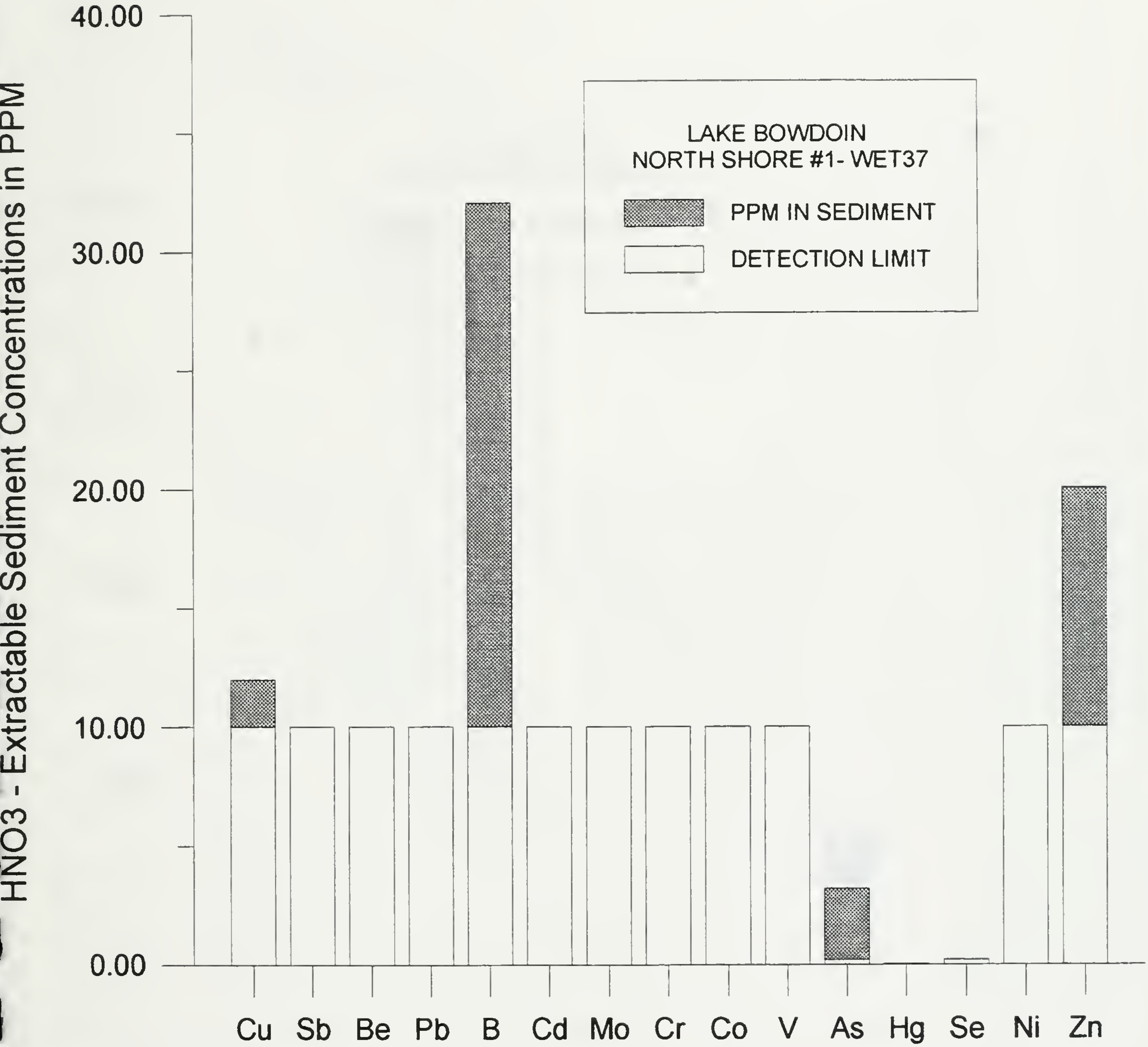
Primary surficial geologic unit 110"LAC"

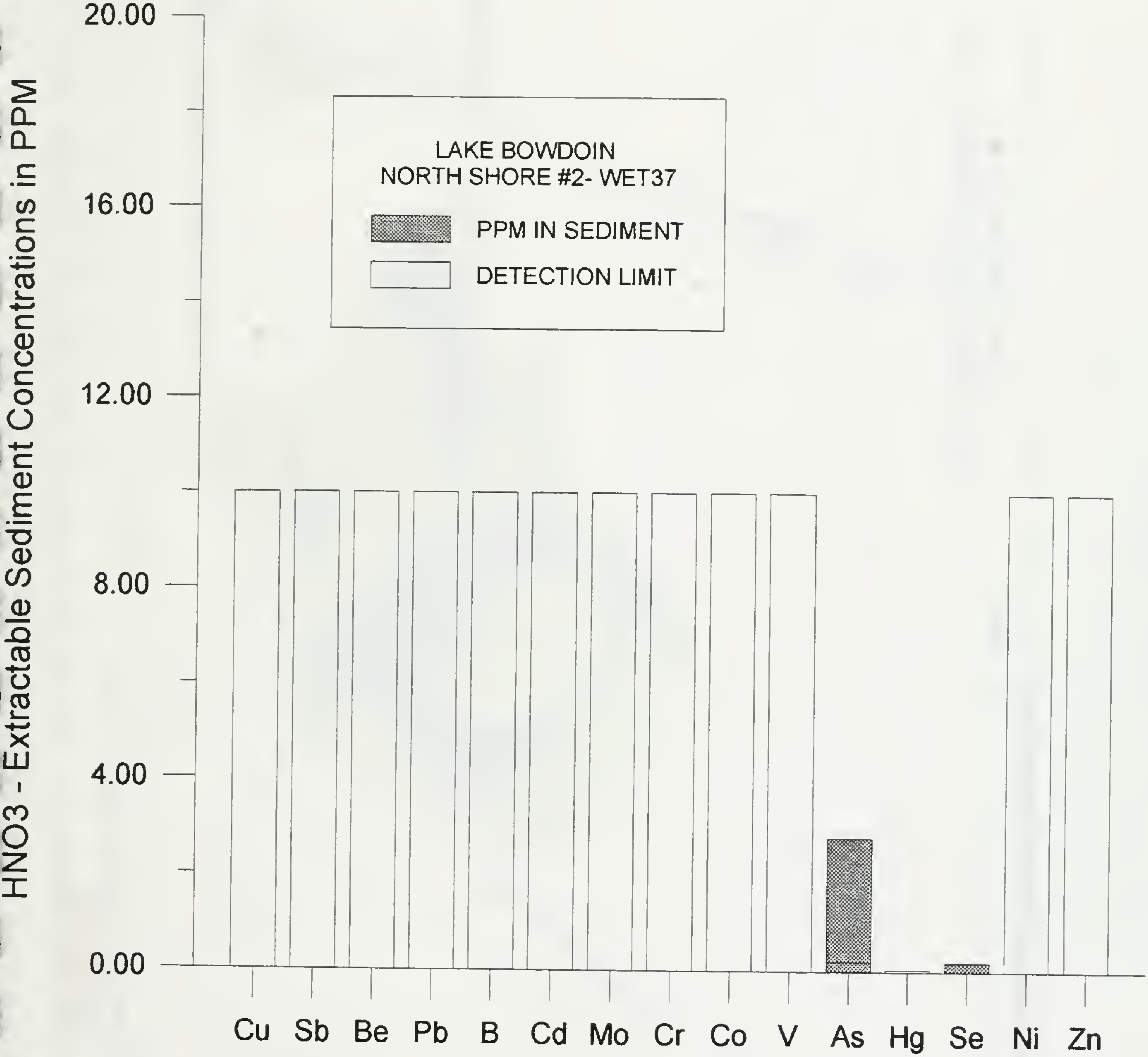
Primary bedrock geologic unit 211CLGG

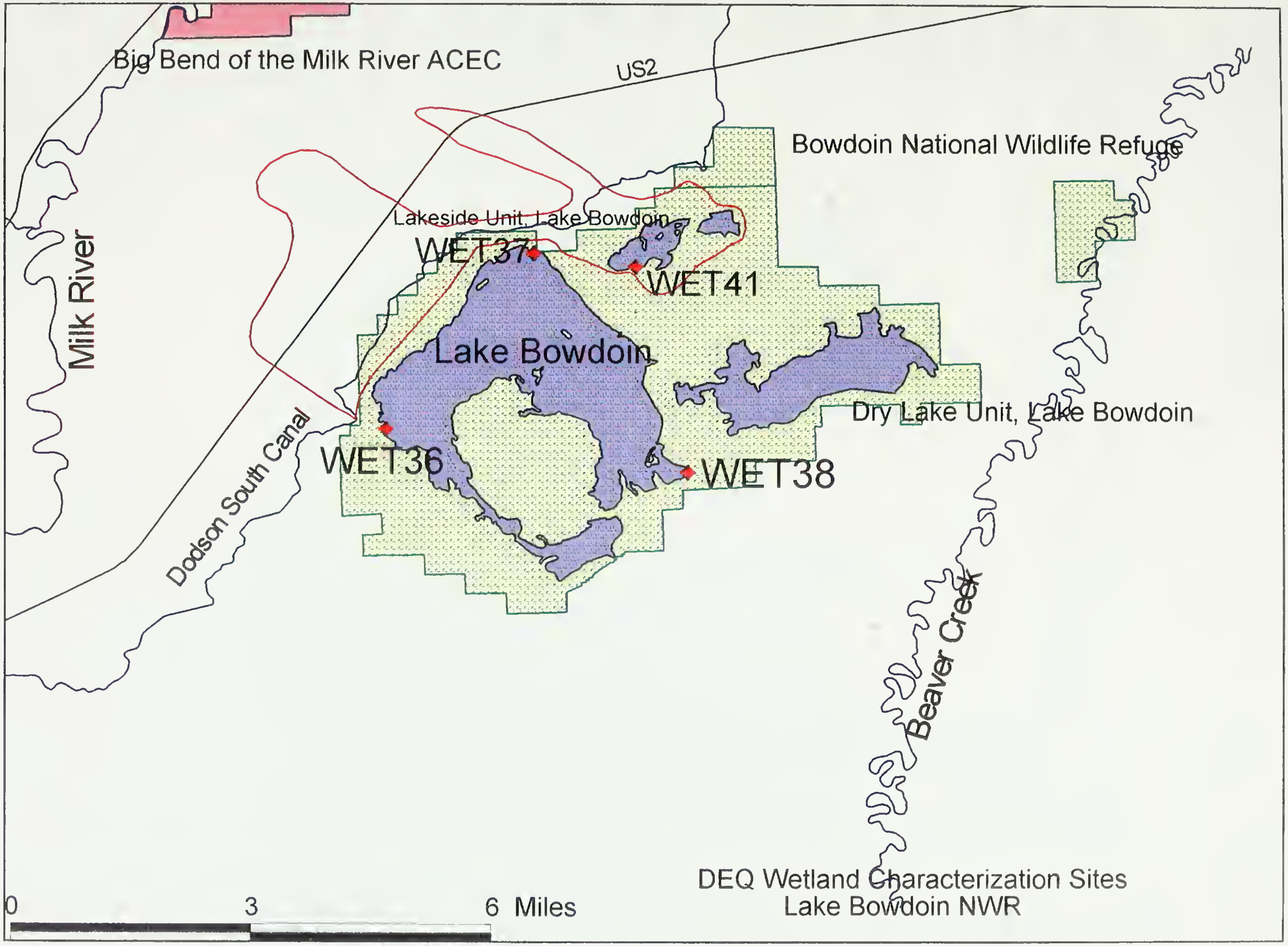

Total Annual Precipitation for Malta 7E
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1972
1976
1980
1984
1988
1992


Monthly Average, Maximum and Minimum Precipitation
Malta 7NE
Inches Precipitation
8.00
6.00
4.00
2.00
0.00
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec


LAKE BOWDOIN NS - WET37
Total recoverable concentration in water
Detection Limit
Concentrations in Milligrams per liter
1.600
1.200
0.800
0.400
0.000
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


40.00
30.00
20.00
10.00
0.00
HNO3 - Extractable Sediment Concentrations in PPM
LAKE BOWDOIN
NORTH SHORE #1- WET37
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn


LAKE BOWDOIN
NORTH SHORE #2- WET37
PPM IN SEDIMENT
DETECTION LIMIT
HNO3 - Extractable Sediment Concentrations in PPM
20.00
16.00
12.00
8.00
4.00
0.00
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Sites
Lake Bowdoin NWR

Big Bend of the Milk River ACEC
US2
Bowdoin National Wildlife Refuge
Lakeside Unit, Lake Bowdoin
WET37
WET41
Milk River
Lake Bowdoin
Dry Lake Unit, Lake Bowdoin
WET36
WET38
Dodson South Canal
Beaver Creek
0
3
6 Miles

Wetland: LAKE BOWDOIN OUTLET	Site Code: WET38
7.5 Minute Quad: LAKE BOWDOIN	Lat: 48 23 10 Long: 107 38 33

Mean Annual Precipitation in Inches:	11.00
Mean Annual Potential Evaporation (Penman) in Inches:	39.00
'Net Precipitation' in Inches:	-28.00

Site has a mapped surface inlet.

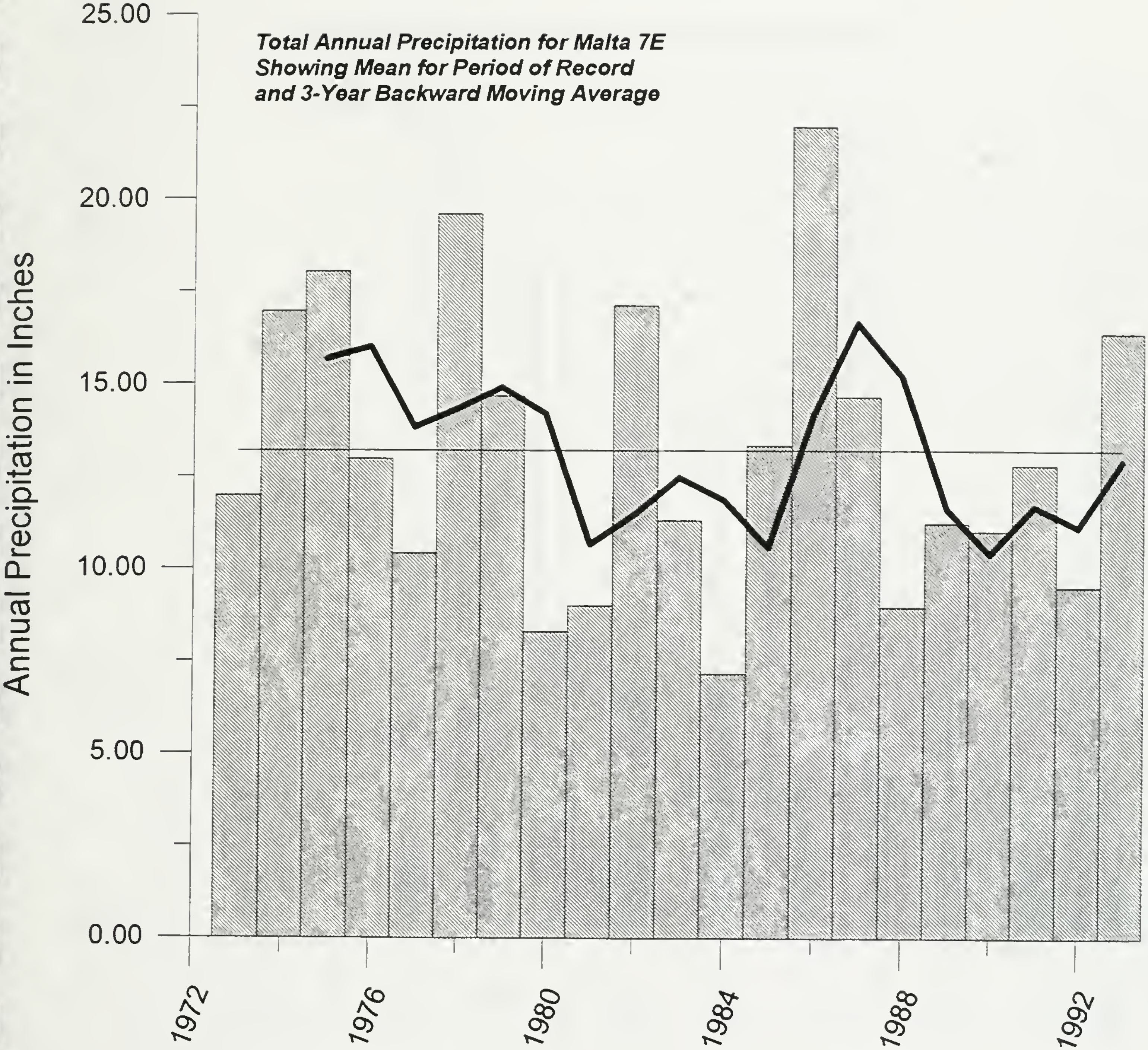
Site has a mapped surface outlet.

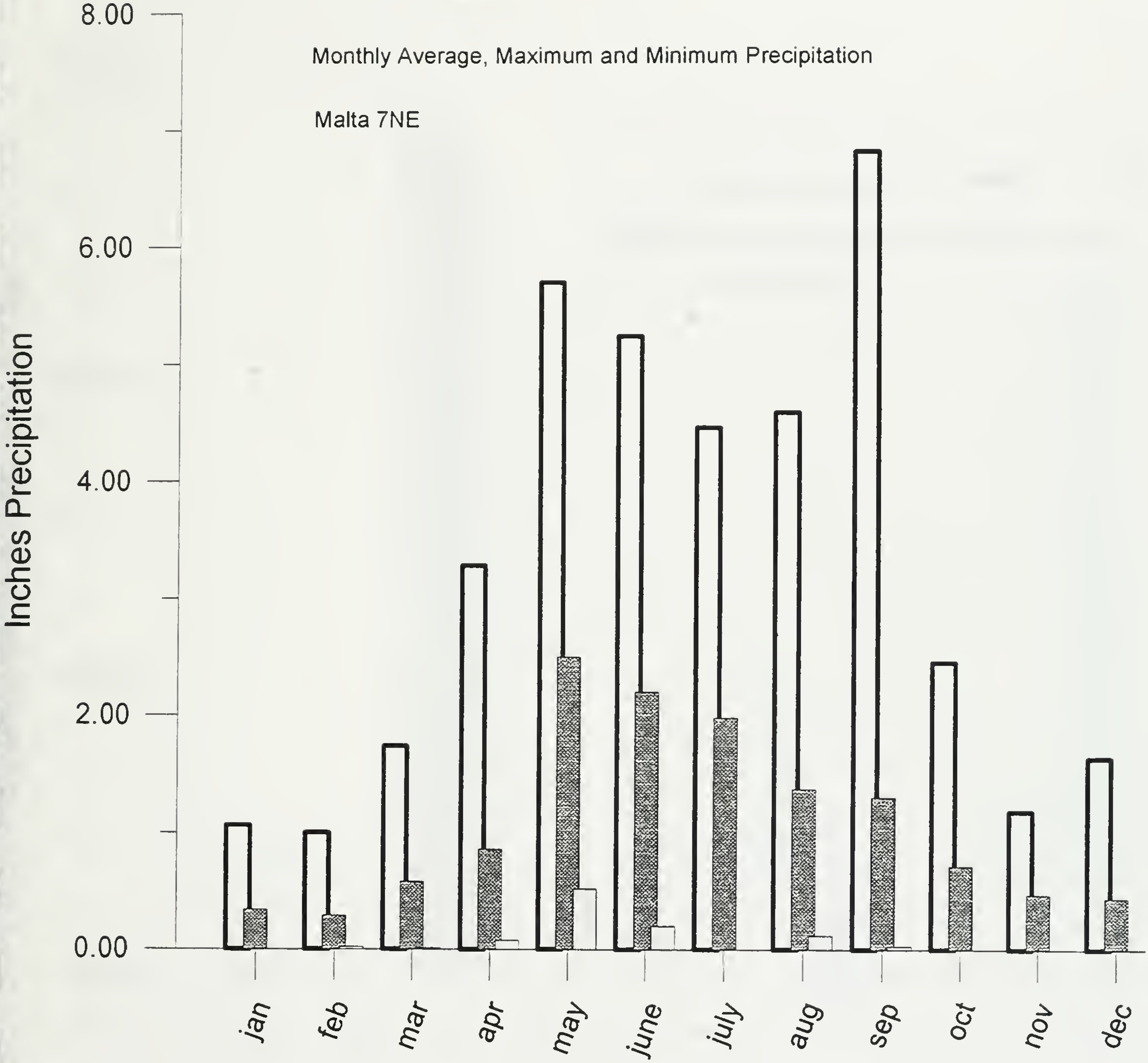
Site is artificially impounded.

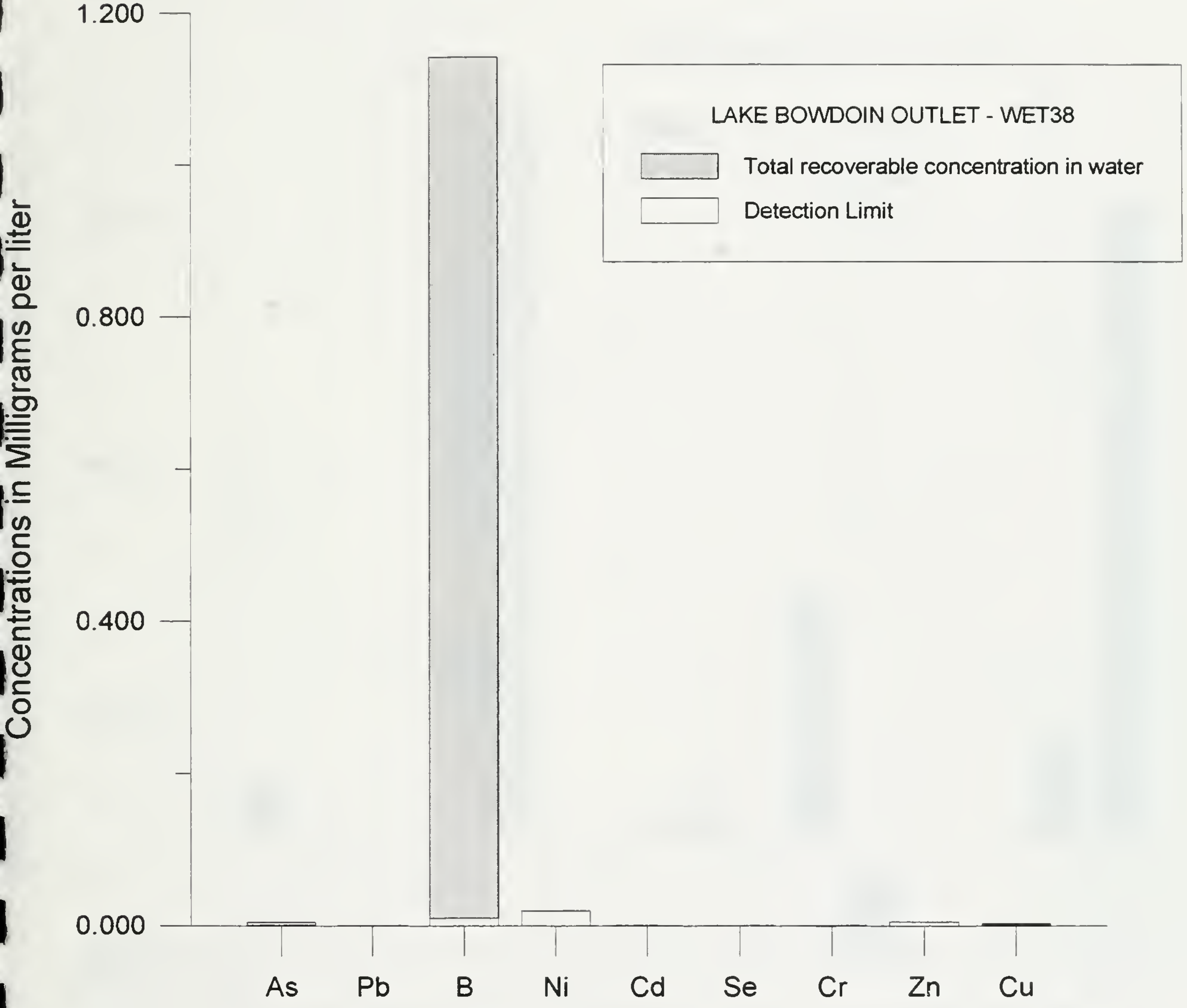
Site has significant water imports.

Mapped area of wetland:	3933 acres
Area of contributing drainage basin:	7166000 acres
Mapped elevation of wetland surface:	2209 ft
Maximum elevation within drainage basin:	2625 ft
Net relief of contributing basin:	416 ft

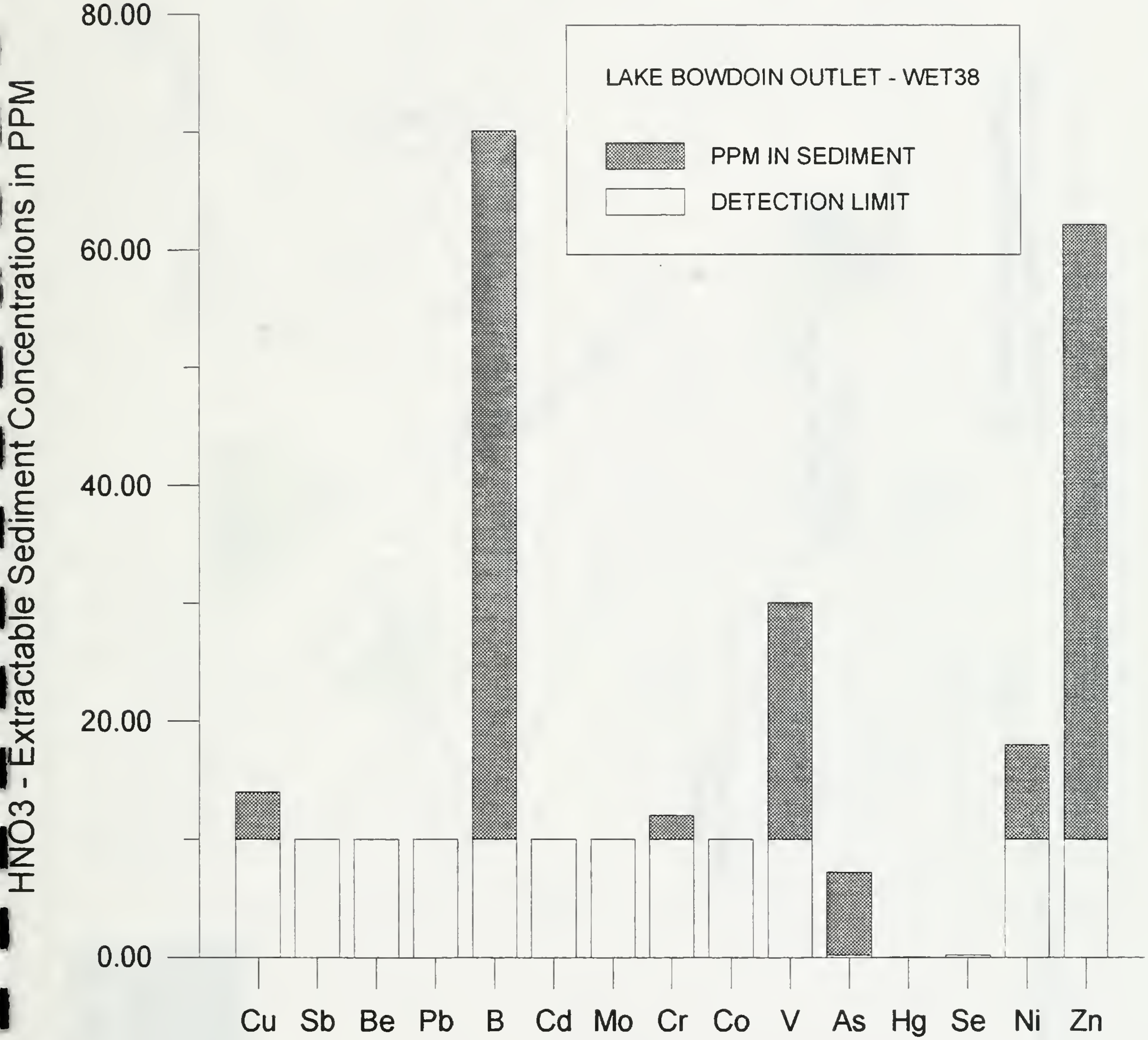
COE Hydrogeomorphic class:	FRINGE
Primary surficial geologic unit	110"LAC"
Primary bedrock geologic unit	211CLGG

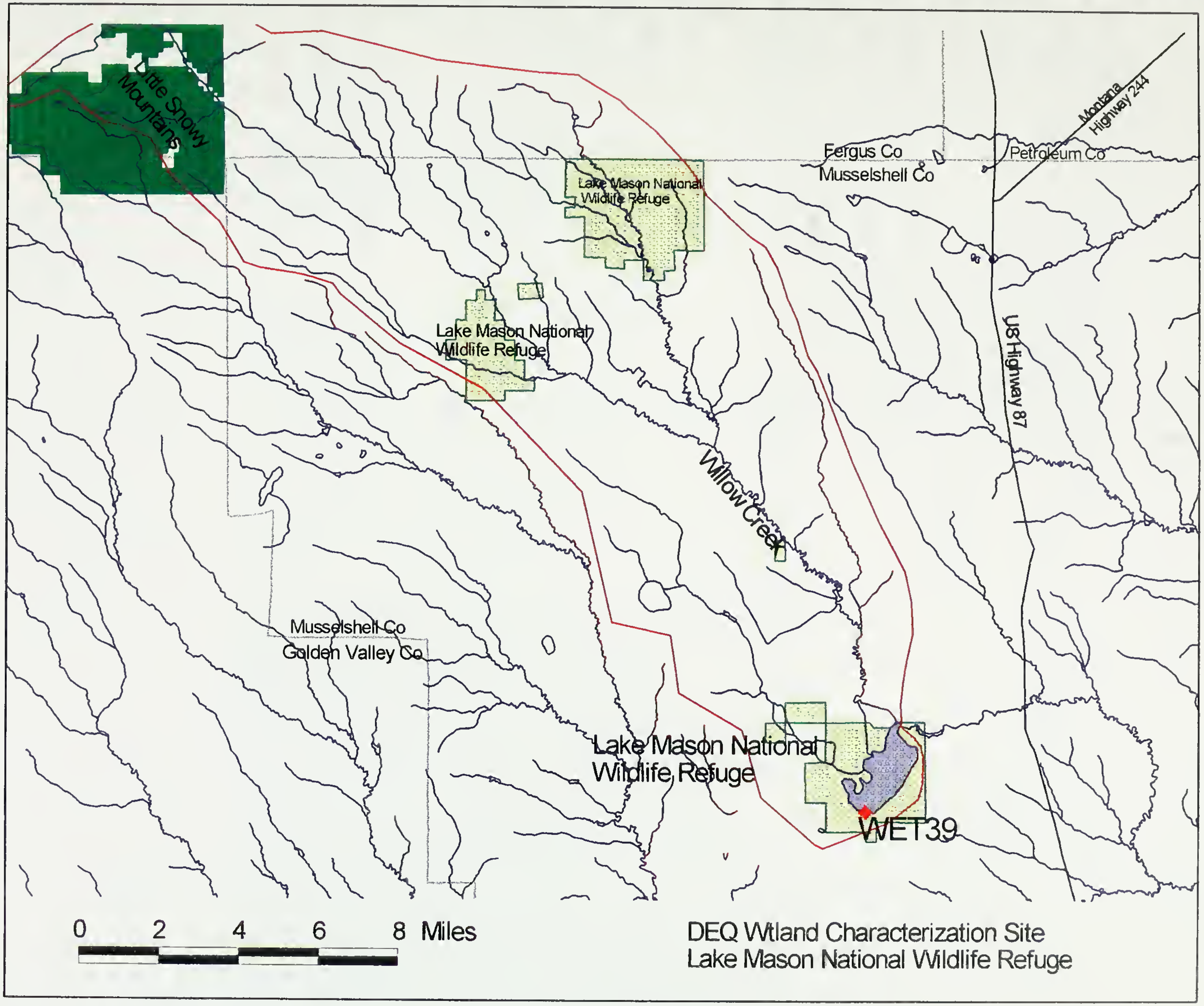

Total Annual Precipitation for Malta 7E
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1972
1976
1980
1984
1988
1992


8.00
6.00
4.00
2.00
0.00
Inches Precipitation
Monthly Average, Maximum and Minimum Precipitation
Malta 7NE
jan
feb
mar
apr
may
june
july
aug
sep
oct
nov
dec



Concentrations in Milligrams per liter
1.200
0.800
0.400
0.000
LAKE BOWDOIN OUTLET - WET38
Total recoverable concentration in water
Detection Limit
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


LAKE BOWDOIN OUTLET - WET38
PPM IN SEDIMENT
DETECTION LIMIT
HNO3 - Extractable Sediment Concentrations in PPM
80.00
60.00
40.00
20.00
0.00
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wtland Characterization Site
Lake Mason National Wildlife Refuge

Wetland: LAKE MASON NWR

Site Code: WET39

7.5 Minute Quad: LAKE MASON

Lat: 46 30 50
Long: 108 40 25

Mean Annual Precipitation in Inches: 11.00

Mean Annual Potential Evaporation (Penman) in Inches: 41.00

'Net Precipitation' in Inches: -30.00

Site has a mapped surface inlet.

Site has a mapped surface outlet.

Site is artificially impounded.

Site does not have known significant water imports.

Mapped area of wetland: 1220 acres

Area of contributing drainage basin: 113170 acres

Mapped elevation of wetland surface: 3606 ft

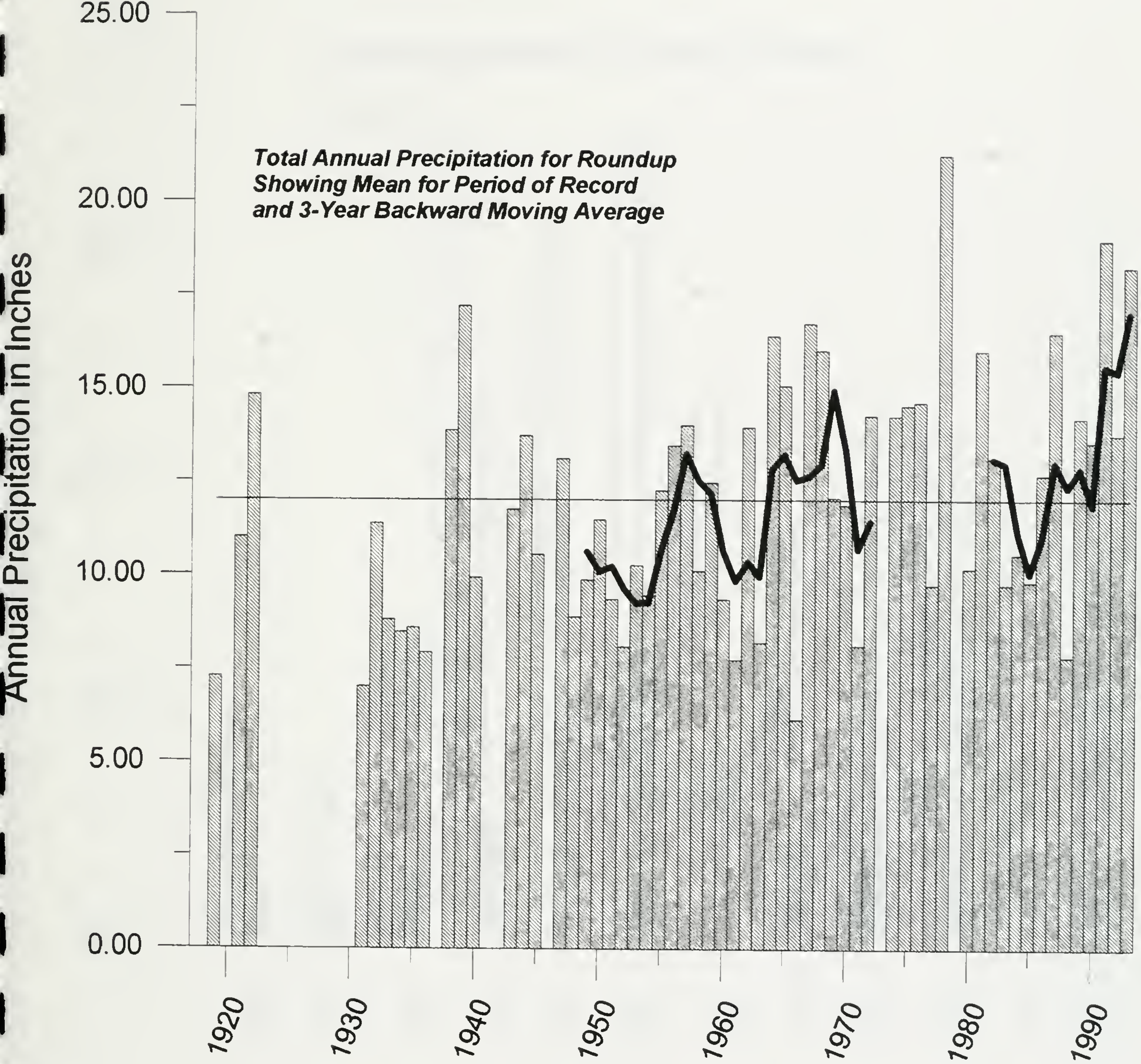
Maximum elevation within drainage basin: 5622 ft

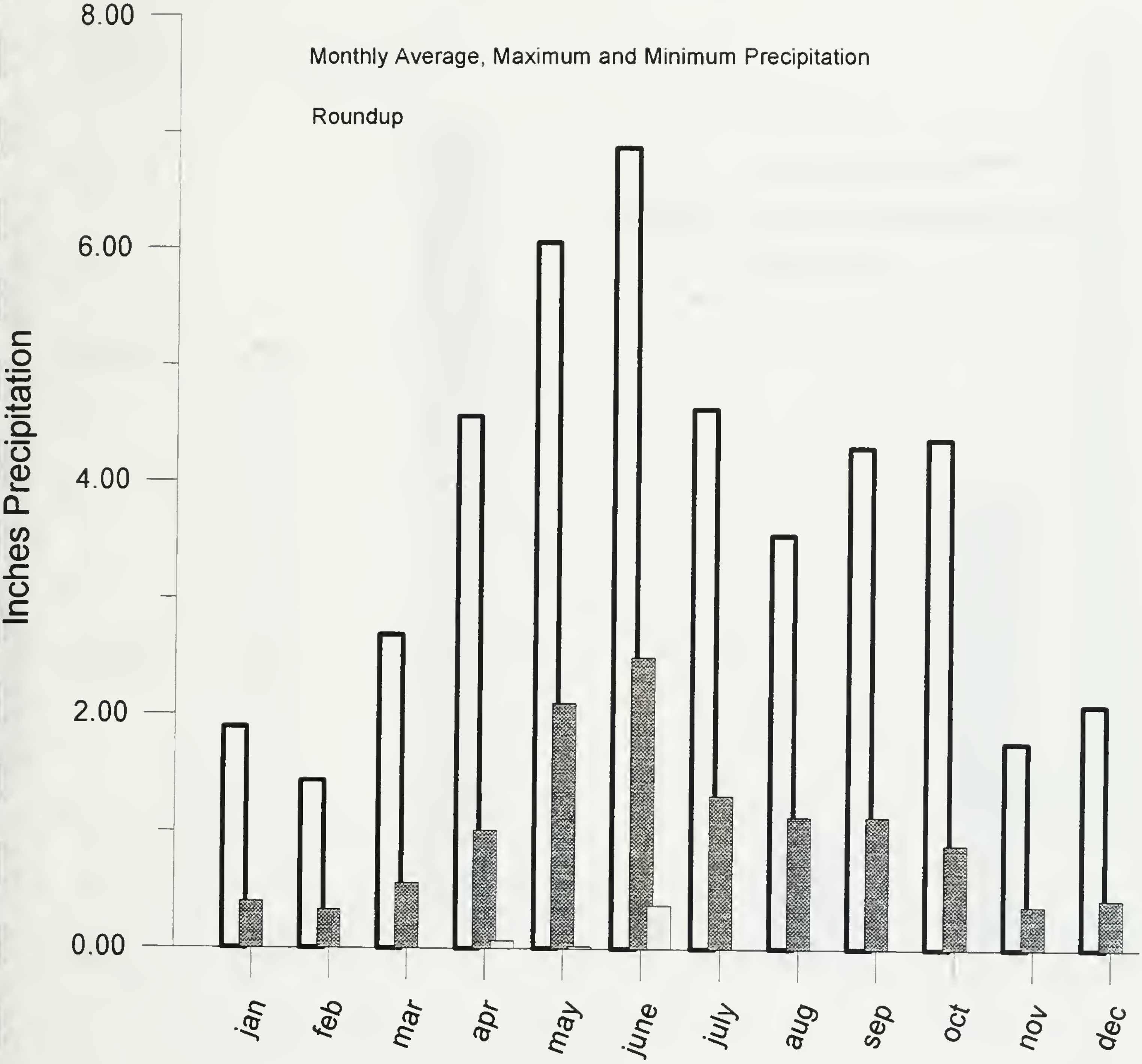
Net relief of contributing basin: 2016 ft

COE Hydrogeomorphic class: FRINGE

Primary surficial geologic unit 110"LAC"

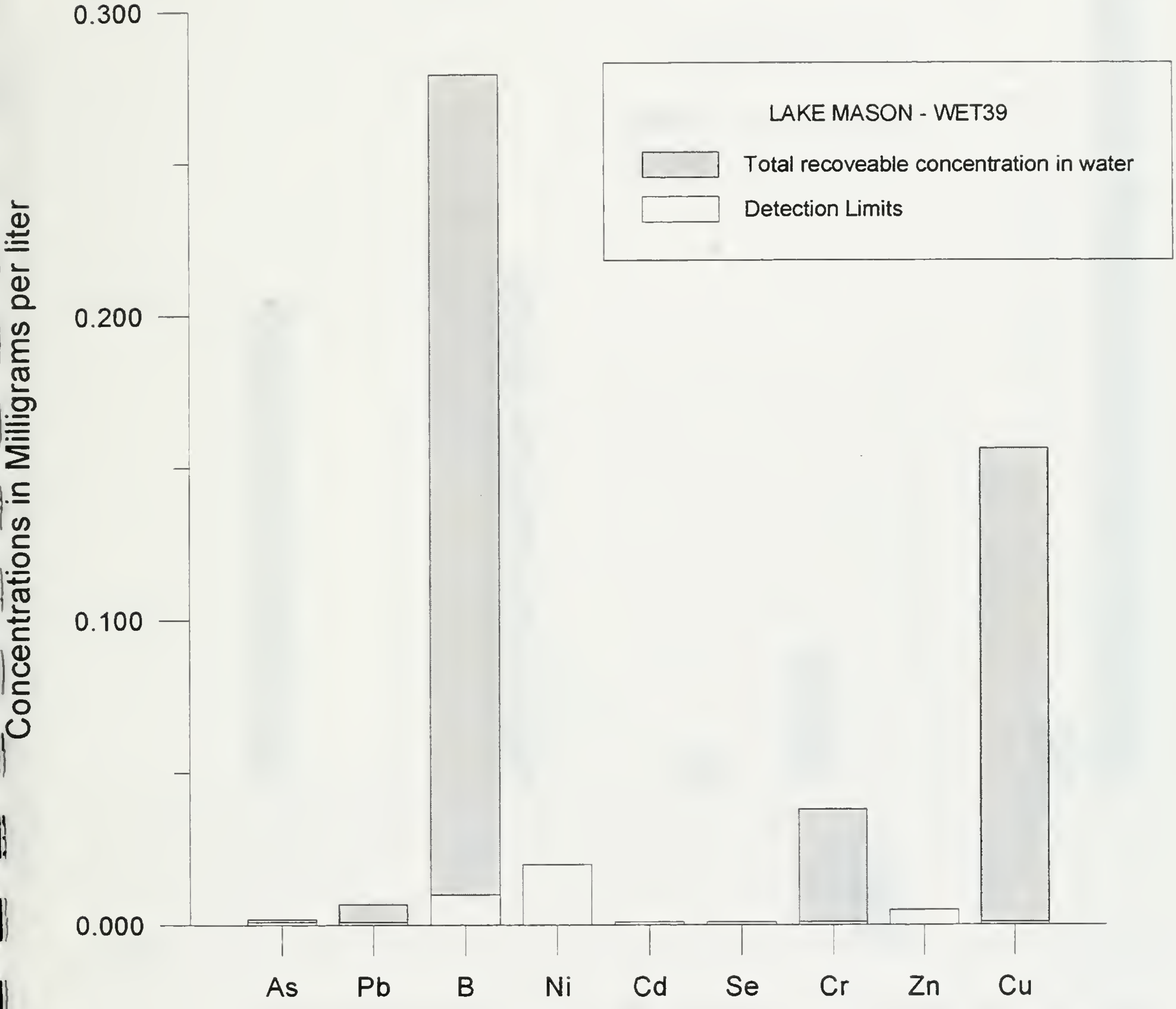
Primary bedrock geologic unit 211LNCE


Total Annual Precipitation for Roundup
Showing Mean for Period of Record
and 3-Year Backward Moving Average
Annual Precipitation in Inches
25.00
20.00
15.00
10.00
5.00
0.00
1920
1930
1940
1950
1960
1970
1980
1990

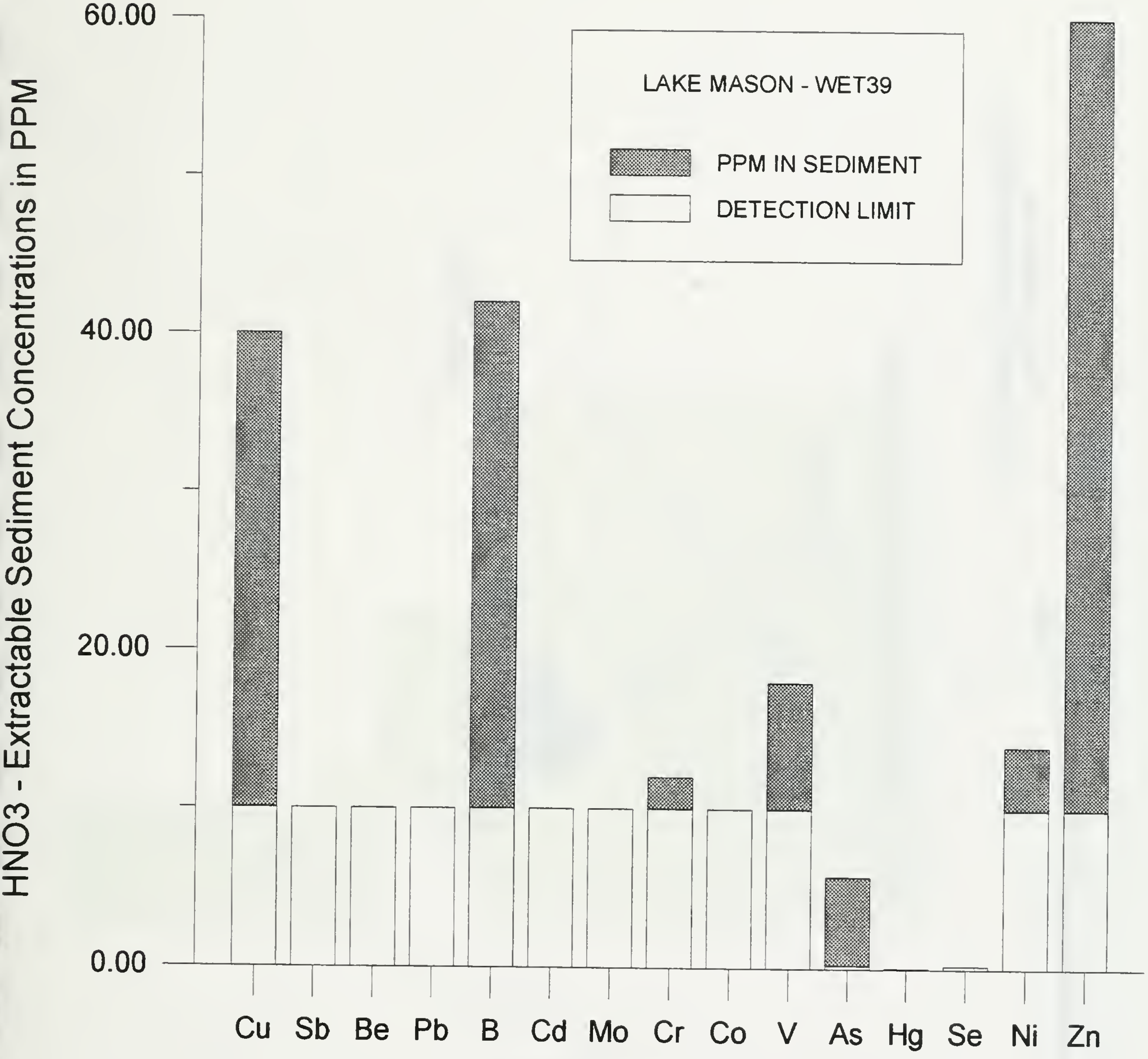


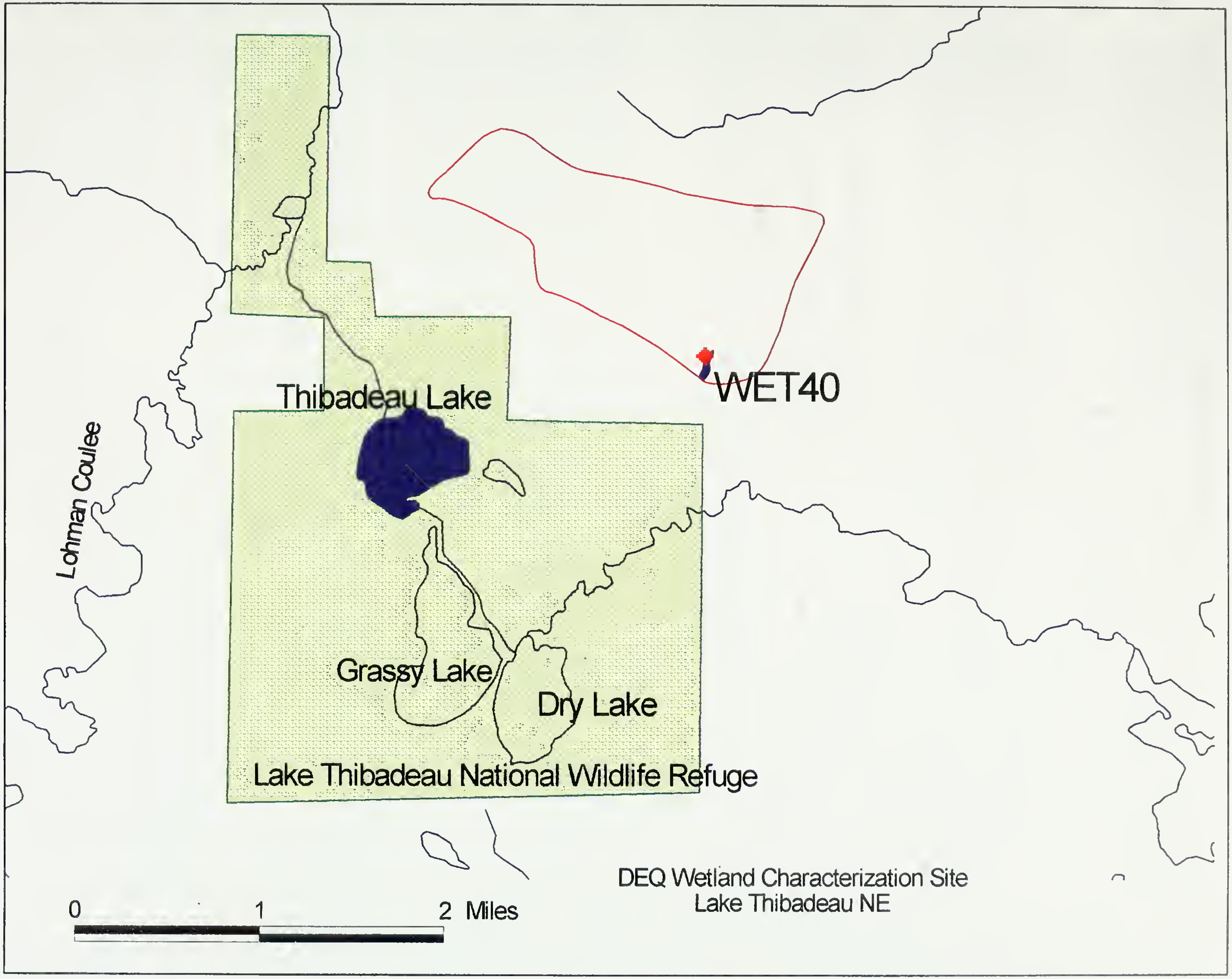
Monthly Average, Maximum and Minimum Precipitation

Roundup



Concentrations in Milligrams per liter
0.300
0.200
0.100
0.000
LAKE MASON - WET39
Total recoveable concentration in water
Detection Limits
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


60.00
40.00
20.00
0.00
HNO3 - Extractable Sediment Concentrations in PPM
LAKE MASON - WET39
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn



DEQ Wetland Characterization Site
Lake Thibadeau NE

Wetland: LAKE THIBADEAU NORTHEAST WETLAND

Site Code: WET40

7.5 Minute Quad: LAKE THIBADEAU

Lat: 48 46 5
Long: 109 34 10

Mean Annual Precipitation in Inches: 11.00

Mean Annual Potential Evaporation (Penman) in Inches: 37.00

'Net Precipitation' in Inches: -26.00

Site has a mapped surface inlet.

Site has a mapped surface outlet.

Site is artificially impounded.

Site does not have known significant water imports.

Mapped area of wetland: 3 acres

Area of contributing drainage basin: 900 acres

Mapped elevation of wetland surface: 2722 ft

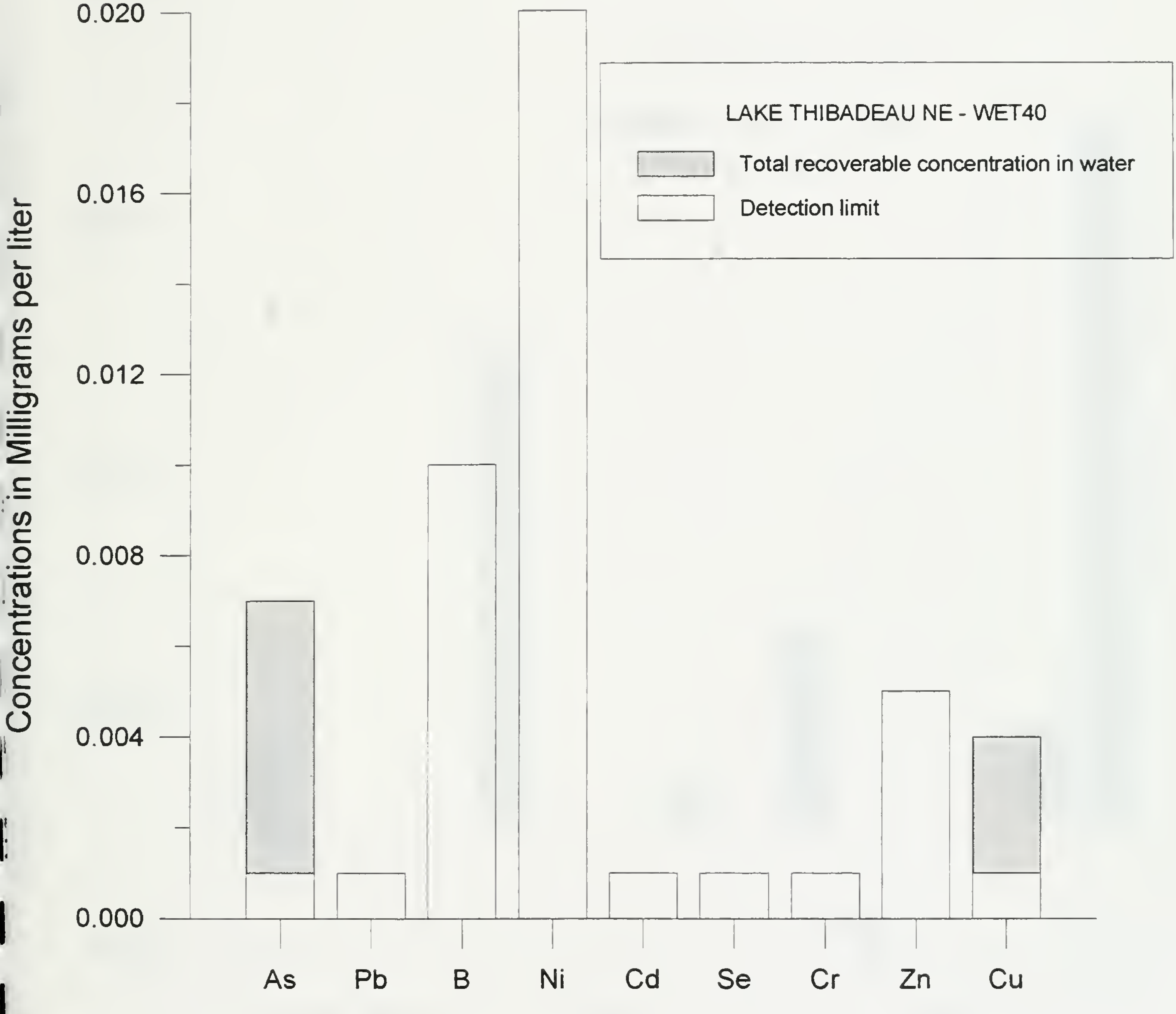
Maximum elevation within drainage basin: 2787 ft

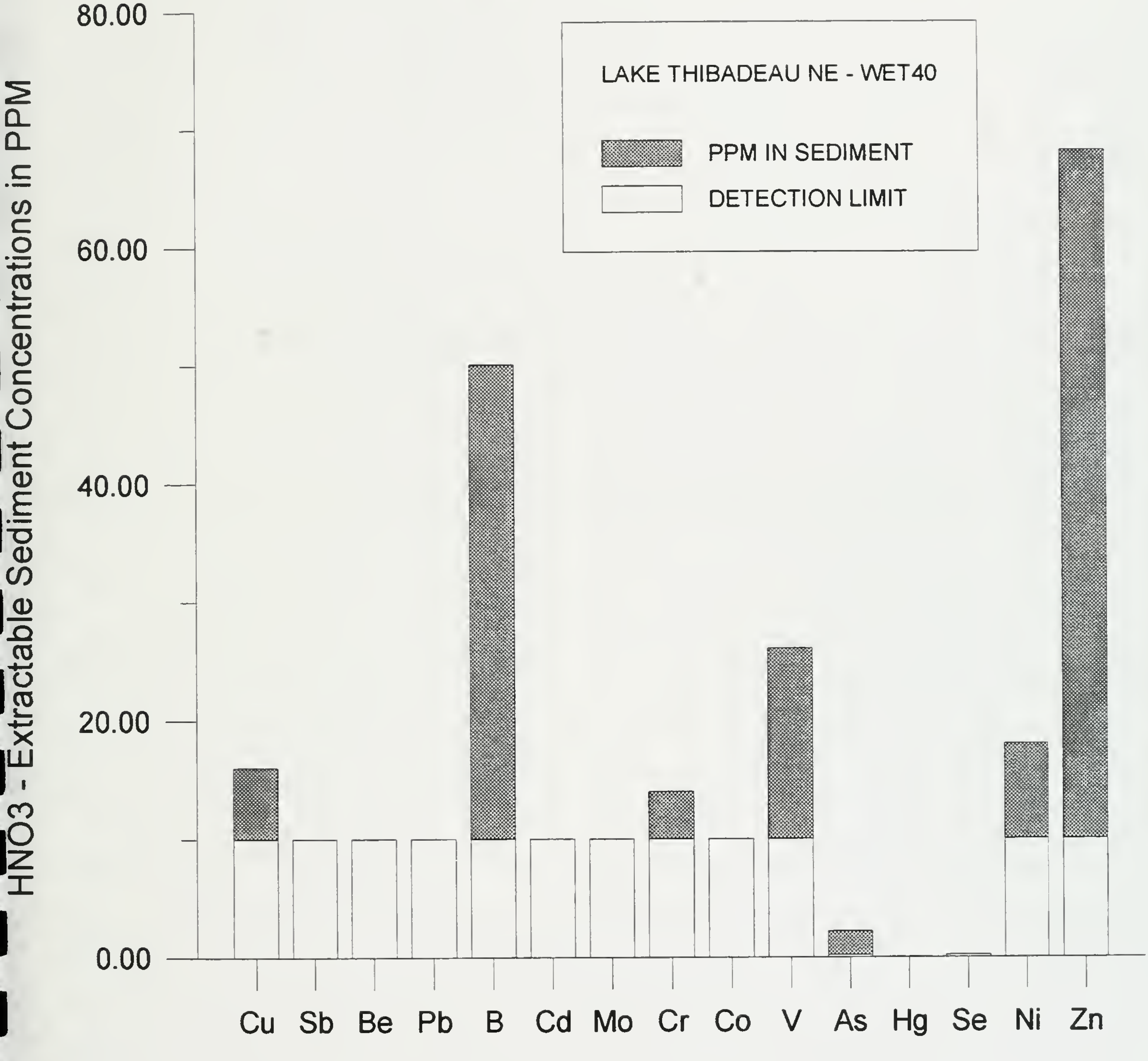
Net relief of contributing basin: 65 ft

COE Hydrogeomorphic class: DEPRESSIONAL

Primary surficial geologic unit 112DRFT

Primary bedrock geologic unit 211BRPW


Concentrations in Milligrams per liter
0.020
0.016
0.012
0.008
0.004
0.000
LAKE THIBADEAU NE - WET40
Total recoverable concentration in water
Detection limit
As
Pb
B
Ni
Cd
Se
Cr
Zn
Cu


80.00
60.00
40.00
20.00
0.00
HNO3 - Extractable Sediment Concentrations in PPM
LAKE THIBADEAU NE - WET40
PPM IN SEDIMENT
DETECTION LIMIT
Cu
Sb
Be
Pb
B
Cd
Mo
Cr
Co
V
As
Hg
Se
Ni
Zn